

## Supplementary materials:

# GPS-YNO2: Computational prediction of tyrosine nitration sites in proteins

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**Running title:** *Prediction of nitration sites*

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## Supplementary Tables

**Supplementary Table S1** – We collected 1,066 experimentally identified nitration sites in 554 unique proteins from the scientific literature (PubMed). *a.* UniProt, the UniProt accession numbers of the nitrated substrates; *b.* Position, the position of the PTN sites; *c.* PMID, the primary references for the experimentally verified tyrosine nitration sites.

**Supplementary Table S2** – From large-scale and small-scale experimental studies, we also collected 370 potentially nitrated substrates. The exact nitration sites had still not been experimentally determined. The default threshold (medium) was adopted for GPS-YNO2 1.0.

**Supplementary Table S3** – The top 15 most enriched biological processes, molecular functions and cellular localizations of PTN substrates in humans, respectively. *a.* the number of proteins annotated; *b.* the proportion of proteins annotated; *c.* E-ratio, enrichment ratio, the nitration proportion divided by the proteomic proportion.

**Supplementary Table S4** – The top 15 most enriched biological processes, molecular functions and cellular localizations of S-nitrosylation substrates in humans, respectively. *a.* the number of proteins annotated; *b.* the proportion of proteins annotated; *c.* E-ratio, enrichment ratio, the S-nitrosylation proportion by the proteomic proportion.

**Supplementary Table S1** – We collected 1,066 experimentally identified nitration sites in 554 unique proteins from the scientific literature (PubMed). *a.* UniProt, the UniProt accession numbers of the nitrated substrates; *b.* Position, the position of the PTN sites; *c.* PMID, the primary references for the experimentally verified tyrosine nitration sites.

UniProt <sup>a</sup>	Position <sup>b</sup>	Organism	PMID <sup>c</sup>
Q9L422	51	<i>A. sp.</i>	17875643
P00781	21	<i>B. licheniformis</i>	3539144
P00781	56	<i>B. licheniformis</i>	3539144
P00781	90	<i>B. licheniformis</i>	3539144
P00781	103	<i>B. licheniformis</i>	3539144
P00781	142	<i>B. licheniformis</i>	3539144
P00781	166	<i>B. licheniformis</i>	3539144
P00781	205	<i>B. licheniformis</i>	3539144
P00781	208	<i>B. licheniformis</i>	3539144
P00781	213	<i>B. licheniformis</i>	3539144
P00781	237	<i>B. licheniformis</i>	3539144
P00781	261	<i>B. licheniformis</i>	3539144
P00781	262	<i>B. licheniformis</i>	3539144
P07999	160	<i>B. licheniformis</i>	6432532
P07999	254	<i>B. licheniformis</i>	6432532
P14779	335	<i>B. licheniformis</i>	11082183
P08877	29	<i>B. subtilis</i>	3933558
P08877	37	<i>B. subtilis</i>	3933558
P68735	242	<i>B. subtilis</i>	2628428;1368747
P68735	379	<i>B. subtilis</i>	2628428;1368747
P00257	140	<i>B. taurus</i>	173389
P00366	319	<i>B. taurus</i>	18835362
P00366	458	<i>B. taurus</i>	18835362
P00366	464	<i>B. taurus</i>	5289018;5101770;2277035
P00366	528	<i>B. taurus</i>	18835362
P00366	550	<i>B. taurus</i>	18835362
P00442	109	<i>B. taurus</i>	1444476;10933892
P00730	308	<i>B. taurus</i>	566110
P00730	358	<i>B. taurus</i>	566110;942853
P00766	146	<i>B. taurus</i>	241645
P00766	171	<i>B. taurus</i>	241645
P01180	80	<i>B. taurus</i>	6500806
P02663	199	<i>B. taurus</i>	19242934
P02666	208	<i>B. taurus</i>	19242934
P02754	115	<i>B. taurus</i>	19242934
P02769	54	<i>B. taurus</i>	11433534;14582650
P02769	108	<i>B. taurus</i>	17661312;11373077;12927827
P02769	161	<i>B. taurus</i>	11433534;12096111;14582650;19610626;11373077;12918979;16443167
P02769	163	<i>B. taurus</i>	11433534;14582650;11373077
P02769	171	<i>B. taurus</i>	17661312
P02769	173	<i>B. taurus</i>	12096111;14582650
P02769	179	<i>B. taurus</i>	17661312
P02769	180	<i>B. taurus</i>	17661312
P02769	184	<i>B. taurus</i>	14582650
P02769	286	<i>B. taurus</i>	14582650;15345482

P02769	342	<i>B. taurus</i>	14582650;19610626
P02769	355	<i>B. taurus</i>	12096111;14582650
P02769	357	<i>B. taurus</i>	12096111;14582650;15345482
P02769	364	<i>B. taurus</i>	14582650;19610626;11373077;12927827;16443167
P02769	376	<i>B. taurus</i>	14582650;19610626
P02769	393	<i>B. taurus</i>	14582650
P02769	424	<i>B. taurus</i>	11433534;12096111;14582650;15345482
P02769	434	<i>B. taurus</i>	14582650;11373077
P02769	475	<i>B. taurus</i>	11433534;14582650;16443167
P02769	520	<i>B. taurus</i>	14582650;15345482
P11151	103	<i>B. taurus</i>	19715756
P11151	124	<i>B. taurus</i>	19715756
P11151	130	<i>B. taurus</i>	19715756
P11151	194	<i>B. taurus</i>	19715756
P11151	318	<i>B. taurus</i>	19715756
P11151	341	<i>B. taurus</i>	19715756
P11151	346	<i>B. taurus</i>	19715756
P11151	455	<i>B. taurus</i>	19715756
P17694	47	<i>B. taurus</i>	19150419
P17694	53	<i>B. taurus</i>	19150419
P23709	247	<i>B. taurus</i>	19150419
P31039	56	<i>B. taurus</i>	18682392
P31039	142	<i>B. taurus</i>	18682392
P48305	6	<i>B. taurus</i>	18708664
P48305	47	<i>B. taurus</i>	12857734
P48305	51	<i>B. taurus</i>	12857734
P48305	52	<i>B. taurus</i>	12857734
P48305	129	<i>B. taurus</i>	12857734
P61625	1064	<i>B. taurus</i>	19242934
P61823	99	<i>B. taurus</i>	10218497
P61823	102	<i>B. taurus</i>	10218497
P61823	141	<i>B. taurus</i>	4026312;10218497
Q02366	123	<i>B. taurus</i>	12857734
Q9N212	298	<i>B. taurus</i>	19242934
P60615	45	<i>B. multincinctus</i>	7093206
P60615	75	<i>B. multincinctus</i>	7093206
P00294	83	<i>C. bursa-</i>	4063351
P00784	137	<i>C. papaya</i>	739010
P00784	194	<i>C. papaya</i>	739010
P00784	236	<i>C. papaya</i>	739010
P00784	249	<i>C. papaya</i>	739010
Q60468	128	<i>C. migratorius</i>	17397138
Q60468	162	<i>C. migratorius</i>	17397138
Q60468	163	<i>C. migratorius</i>	17397138
Q60468	218	<i>C. migratorius</i>	17397138
Q60468	225	<i>C. migratorius</i>	17397138
Q60468	226	<i>C. migratorius</i>	17397138
P69542	26	<i>E. phage fd</i>	1125177
P69542	41	<i>E. phage fd</i>	1125177
P69542	56	<i>E. phage fd</i>	1125177
P03040	26	<i>E. phage</i>	3910646;3156052
P03040	51	<i>E. phage</i>	3910646;3156052
P13332	64	<i>E. phage T4</i>	2143079

P13332	74	<i>E. phage T4</i>	2143079
P13332	226	<i>E. phage T4</i>	2143079
P13332	255	<i>E. phage T4</i>	2143079
P13332	271	<i>E. phage T4</i>	2143079
P13332	305	<i>E. phage T4</i>	2143079
P13332	456	<i>E. phage T4</i>	2143079
P13332	461	<i>E. phage T4</i>	2143079
P13332	494	<i>E. phage T4</i>	2143079
P13332	533	<i>E. phage T4</i>	2143079
P13332	536	<i>E. phage T4</i>	2143079
P13332	570	<i>E. phage T4</i>	2143079
P13332	591	<i>E. phage T4</i>	2143079
P07515	37	<i>E. faecalis</i>	3933558
P00004	49	<i>E. faecalis</i>	10770952;15924423;17202652
P00004	68	<i>E. faecalis</i>	10770952;15924423;17202652
P00004	75	<i>E. faecalis</i>	10770952;15924423;17202652
P00004	98	<i>E. faecalis</i>	15924423
P01245	54	<i>E. faecalis</i>	14079
P01245	61	<i>E. faecalis</i>	14079
P01245	68	<i>E. faecalis</i>	14079
P01245	135	<i>E. faecalis</i>	62669
P01245	167	<i>E. faecalis</i>	14079
P01245	184	<i>E. faecalis</i>	14079
P01245	200	<i>E. faecalis</i>	14079
P03023	7	<i>E. coli</i>	7011373;329889;7014561
P03023	12	<i>E. coli</i>	7011373;7014561
P03023	17	<i>E. coli</i>	7011373;329889;7014561
P03023	47	<i>E. coli</i>	7011373;7014561
P06968	92	<i>E. coli</i>	8142479
P0A6A8	72	<i>E. coli</i>	11049751
P0A786	241	<i>E. coli</i>	348700
P0A881	7	<i>E. coli</i>	2499455
P0A881	30	<i>E. coli</i>	2499455
P0A9C5	101	<i>E. coli</i>	9501167
P0A9C5	115	<i>E. coli</i>	9501167
P0A9C5	180	<i>E. coli</i>	9501167
P0A9C5	288	<i>E. coli</i>	9501167
P0A9C5	297	<i>E. coli</i>	9501167
P0A9C5	327	<i>E. coli</i>	9501167
P0A9C5	335	<i>E. coli</i>	9501167
P0A9C5	398	<i>E. coli</i>	8700834;9501167
P0AGD3	35	<i>E. coli</i>	11736645
P12758	169	<i>E. coli</i>	7578229
P33341	734	<i>E. coli</i>	17243771
P42914	139	<i>E. coli</i>	17243771
P45848	70	<i>E. coli</i>	17243771
P68699	10	<i>E. coli</i>	2890375
P68699	73	<i>E. coli</i>	2890375
P69924	3	<i>E. coli</i>	10769119
P69924	63	<i>E. coli</i>	10769119
P69924	123	<i>E. coli</i>	10769119
P69924	290	<i>E. coli</i>	10769119
Q8X1D8	398	<i>F. oxysporum</i>	10653664

P00698	38	<i>F. oxysporum</i>	4979752;5144265;4101514;2277035;16899211;19135975
P00698	41	<i>F. oxysporum</i>	4979752;5144265;4101514;2277035;16899211;19135975
P00698	71	<i>F. oxysporum</i>	4101514;16899211;19135975
P02701	57	<i>F. oxysporum</i>	8645205;18983180;19551994
P02945	39	<i>H. salinarium</i>	7016540;6286619;6549264;3427039;3004563
P02945	77	<i>H. salinarium</i>	7016540;6286619;6549264;3427039;3004563
P02945	144	<i>H. salinarium</i>	7016540
P02945	146	<i>H. salinarium</i>	7016540
P01050	3	<i>H. medicinalis</i>	1991108
P01050	63	<i>H. medicinalis</i>	1991108
P00338	10	<i>H. sapiens</i>	19741252
P00338	83	<i>H. sapiens</i>	19741252
P00338	239	<i>H. sapiens</i>	19741252
P00390	150	<i>H. sapiens</i>	9005440;11705998
P00390	158	<i>H. sapiens</i>	9005440;11705998
P00558	76	<i>H. sapiens</i>	19741252;17497906
P00558	161	<i>H. sapiens</i>	17497906
P00558	196	<i>H. sapiens</i>	19741252
P00709	37	<i>H. sapiens</i>	812700
P00709	122	<i>H. sapiens</i>	812700
P00734	553	<i>H. sapiens</i>	1988465
P00747	416	<i>H. sapiens</i>	2996892
P00747	425	<i>H. sapiens</i>	2996892
P00749	44	<i>H. sapiens</i>	7548000
P01009	62	<i>H. sapiens</i>	3499901
P01009	162	<i>H. sapiens</i>	3499901
P01009	184	<i>H. sapiens</i>	3499901
P01009	211	<i>H. sapiens</i>	3499901
P01009	268	<i>H. sapiens</i>	3499901
P01009	321	<i>H. sapiens</i>	3499901
P01024	686	<i>H. sapiens</i>	2410424
P01024	730	<i>H. sapiens</i>	2410424
P01031	700	<i>H. sapiens</i>	2410424
P01112	4	<i>H. sapiens</i>	16841939
P01112	40	<i>H. sapiens</i>	16841939
P01112	96	<i>H. sapiens</i>	16841939
P01112	137	<i>H. sapiens</i>	16841939
P01112	157	<i>H. sapiens</i>	16841939
P01857	161	<i>H. sapiens</i>	2784672
P01857	202	<i>H. sapiens</i>	2784672
P02462	348	<i>H. sapiens</i>	17334231
P02462	534	<i>H. sapiens</i>	17334231
P02647	42	<i>H. sapiens</i>	15574409;15498770
P02647	53	<i>H. sapiens</i>	15574409;15498770
P02647	190	<i>H. sapiens</i>	15574409;15498770
P02647	216	<i>H. sapiens</i>	15574409
P02647	260	<i>H. sapiens</i>	15574409
P02675	322	<i>H. sapiens</i>	18818200
P02675	452	<i>H. sapiens</i>	18818200
P04114	103	<i>H. sapiens</i>	18713619
P04114	144	<i>H. sapiens</i>	17275684
P04114	276	<i>H. sapiens</i>	18713619
P04114	413	<i>H. sapiens</i>	18713619

P04114	666	<i>H. sapiens</i>	18713619
P04114	720	<i>H. sapiens</i>	18713619
P04114	2524	<i>H. sapiens</i>	17275684;18713619
P04114	3139	<i>H. sapiens</i>	18713619
P04114	3295	<i>H. sapiens</i>	17275684;18713619
P04114	3489	<i>H. sapiens</i>	18713619
P04114	3771	<i>H. sapiens</i>	18713619
P04114	4088	<i>H. sapiens</i>	18713619
P04114	4116	<i>H. sapiens</i>	17275684
P04114	4141	<i>H. sapiens</i>	18713619
P04114	4211	<i>H. sapiens</i>	17275684
P04179	58	<i>H. sapiens</i>	9484232;9603906;10334867;16443160
P04179	69	<i>H. sapiens</i>	9484232
P04179	217	<i>H. sapiens</i>	9484232
P04637	327	<i>H. sapiens</i>	20499882
P05141	195	<i>H. sapiens</i>	19741252
P05181	71	<i>H. sapiens</i>	17907788
P05181	318	<i>H. sapiens</i>	17907788
P05181	381	<i>H. sapiens</i>	17907788
P05181	423	<i>H. sapiens</i>	17907788
P05230	30	<i>H. sapiens</i>	14592461
P05230	70	<i>H. sapiens</i>	14592461
P05230	109	<i>H. sapiens</i>	14592461
P05230	112	<i>H. sapiens</i>	14592461
P05230	140	<i>H. sapiens</i>	14592461
P06576	196	<i>H. sapiens</i>	19650768
P06576	230	<i>H. sapiens</i>	15699043
P06576	247	<i>H. sapiens</i>	19650768;17497906
P06576	269	<i>H. sapiens</i>	19347761;17497906
P06576	331	<i>H. sapiens</i>	19650768
P06576	395	<i>H. sapiens</i>	19741252;19650768;17497906;12857734
P06576	418	<i>H. sapiens</i>	19741252;19650768;17497906
P06576	508	<i>H. sapiens</i>	17497906
P06748	67	<i>H. sapiens</i>	19741252
P07195	84	<i>H. sapiens</i>	19741252
P07195	240	<i>H. sapiens</i>	19741252;7092806
P07311	92	<i>H. sapiens</i>	19741252
P07339	232	<i>H. sapiens</i>	19125694
P07355	30	<i>H. sapiens</i>	19741252
P07737	60	<i>H. sapiens</i>	19741252
P07737	129	<i>H. sapiens</i>	19741252
P07900	197	<i>H. sapiens</i>	17497906
P07900	216	<i>H. sapiens</i>	17497906
P07900	313	<i>H. sapiens</i>	19741252
P07900	627	<i>H. sapiens</i>	19741252
P07910	139	<i>H. sapiens</i>	19741252
P07954	54	<i>H. sapiens</i>	19741252
P07954	270	<i>H. sapiens</i>	19741252
P08133	218	<i>H. sapiens</i>	19741252
P08572	327	<i>H. sapiens</i>	17334231
P08572	1081	<i>H. sapiens</i>	17334231
P08590	73	<i>H. sapiens</i>	20518849
P08590	185	<i>H. sapiens</i>	20518849

P08670	11	<i>H. sapiens</i>	19242934
P08670	30	<i>H. sapiens</i>	19741252
P08670	276	<i>H. sapiens</i>	19741252
P09211	50	<i>H. sapiens</i>	19741252
P09237	167	<i>H. sapiens</i>	15487974
P09429	78	<i>H. sapiens</i>	19741252
P0C7M2	128	<i>H. sapiens</i>	19741252
P0C7M2	167	<i>H. sapiens</i>	17497906
P10145	40	<i>H. sapiens</i>	10433951
P10153	60	<i>H. sapiens</i>	18694936
P10276	208	<i>H. sapiens</i>	10694383
P10276	277	<i>H. sapiens</i>	10694383
P10276	362	<i>H. sapiens</i>	10694383
P10636-	18	<i>H. sapiens</i>	15683253;16566606;17050703
P10636-	29	<i>H. sapiens</i>	15683253;16566606;17050703
P10636-	197	<i>H. sapiens</i>	15683253;16566606;17050703;17768677
P10636-	310	<i>H. sapiens</i>	15683253;16566606;17050703;17497906
P10636-	394	<i>H. sapiens</i>	15683253;16566606;17050703
P10768	202	<i>H. sapiens</i>	19741252
P10768	211	<i>H. sapiens</i>	19741252
P10809	243	<i>H. sapiens</i>	19741252
P10809	503	<i>H. sapiens</i>	19741252
P11142	41	<i>H. sapiens</i>	17497906
P11142	115	<i>H. sapiens</i>	19741252
P11142	134	<i>H. sapiens</i>	19741252;16800626
P11142	149	<i>H. sapiens</i>	12821649;17497906
P11142	183	<i>H. sapiens</i>	17497906
P11142	371	<i>H. sapiens</i>	17497906
P11413	401	<i>H. sapiens</i>	19741252
P11586	52	<i>H. sapiens</i>	19741252
P11586	258	<i>H. sapiens</i>	19741252
P11678	488	<i>H. sapiens</i>	18694936
P12004	60	<i>H. sapiens</i>	19741252
P12724	60	<i>H. sapiens</i>	18694936
P13010	295	<i>H. sapiens</i>	19741252
P13073	38	<i>H. sapiens</i>	19741252
P13639	434	<i>H. sapiens</i>	19741252
P13639	443	<i>H. sapiens</i>	19741252
P13639	671	<i>H. sapiens</i>	19741252
P13796	598	<i>H. sapiens</i>	19741252
P13929	44	<i>H. sapiens</i>	7269977;17497906;19741252
P13929	57	<i>H. sapiens</i>	7269977
P13929	131	<i>H. sapiens</i>	7269977;14607522
P13929	189	<i>H. sapiens</i>	7269977;14607522;19741252
P13929	200	<i>H. sapiens</i>	7269977
P13929	236	<i>H. sapiens</i>	7269977
P13929	252	<i>H. sapiens</i>	7269977;17497906
P13929	257	<i>H. sapiens</i>	7269977
P13929	280	<i>H. sapiens</i>	7269977
P13929	287	<i>H. sapiens</i>	7269977
P13929	407	<i>H. sapiens</i>	7269977
P14618	105	<i>H. sapiens</i>	17497906
P14618	148	<i>H. sapiens</i>	19741252;15851474



P14625	677	<i>H. sapiens</i>	19741252
P14649	86	<i>H. sapiens</i>	19741252
P14902	15	<i>H. sapiens</i>	16365430
P14902	345	<i>H. sapiens</i>	16365430
P14902	353	<i>H. sapiens</i>	16365430
P15311	424	<i>H. sapiens</i>	19741252
P15880	266	<i>H. sapiens</i>	19741252
P16284	713	<i>H. sapiens</i>	12207897
P16401	74	<i>H. sapiens</i>	17497906;19741252
P18669	50	<i>H. sapiens</i>	15699043
P18669	92	<i>H. sapiens</i>	17497906
P18669	142	<i>H. sapiens</i>	19741252
P19338	351	<i>H. sapiens</i>	19741252
P19338	525	<i>H. sapiens</i>	19741252
P19652	45	<i>H. sapiens</i>	1276136
P19652	55	<i>H. sapiens</i>	1276136
P19652	68	<i>H. sapiens</i>	1276136
P19652	96	<i>H. sapiens</i>	1276136
P19652	109	<i>H. sapiens</i>	1276136
P19652	133	<i>H. sapiens</i>	1276136
P19652	145	<i>H. sapiens</i>	1276136
P19652	175	<i>H. sapiens</i>	1276136
P19784	13	<i>H. sapiens</i>	19741252
P20618	158	<i>H. sapiens</i>	19741252
P20700	82	<i>H. sapiens</i>	19741252
P20700	121	<i>H. sapiens</i>	19741252
P20700	482	<i>H. sapiens</i>	19741252
P20813	111	<i>H. sapiens</i>	6722175;3202847
P20813	190	<i>H. sapiens</i>	12588183
P20813	203	<i>H. sapiens</i>	12588183
P20813	235	<i>H. sapiens</i>	6722175;3202847
P20813	244	<i>H. sapiens</i>	17907788
P20813	268	<i>H. sapiens</i>	17907788
P20813	348	<i>H. sapiens</i>	6722175;3202847
P20813	354	<i>H. sapiens</i>	17907788
P20813	380	<i>H. sapiens</i>	6722175;3202847;17907788
P20813	484	<i>H. sapiens</i>	6722175;3202847
P21333	373	<i>H. sapiens</i>	19741252
P21333	1308	<i>H. sapiens</i>	19741252
P22102	417	<i>H. sapiens</i>	19741252
P22234	22	<i>H. sapiens</i>	19741252
P23193	126	<i>H. sapiens</i>	19741252
P23193	273	<i>H. sapiens</i>	19741252
P23246	691	<i>H. sapiens</i>	19741252
P23528	68	<i>H. sapiens</i>	19741252;17497906
P23528	140	<i>H. sapiens</i>	19741252
P24071	223	<i>H. sapiens</i>	15555551
P24666	88	<i>H. sapiens</i>	19741252
P25205	147	<i>H. sapiens</i>	19741252
P25205	456	<i>H. sapiens</i>	19741252
P25705	337	<i>H. sapiens</i>	17497906
P25705	440	<i>H. sapiens</i>	19741252
P25788	8	<i>H. sapiens</i>	19741252

P25963	181	<i>H. sapiens</i>	17910475
P25963	305	<i>H. sapiens</i>	17910475
P26038	85	<i>H. sapiens</i>	19741252
P26599	247	<i>H. sapiens</i>	19741252
P26599	430	<i>H. sapiens</i>	19741252
P26639	252	<i>H. sapiens</i>	19741252
P26639	298	<i>H. sapiens</i>	19741252
P27361	156	<i>H. sapiens</i>	20383279
P27797	285	<i>H. sapiens</i>	19741252
P27816	1001	<i>H. sapiens</i>	19741252
P27824	70	<i>H. sapiens</i>	19741252
P28072	59	<i>H. sapiens</i>	19741252
P29372	162	<i>H. sapiens</i>	19864471
P29474	81	<i>H. sapiens</i>	18756022
P29474	163	<i>H. sapiens</i>	18756022
P29474	210	<i>H. sapiens</i>	18756022
P29474	331	<i>H. sapiens</i>	18756022
P29474	357	<i>H. sapiens</i>	18756022
P29474	373	<i>H. sapiens</i>	18756022
P29474	410	<i>H. sapiens</i>	18756022
P29474	524	<i>H. sapiens</i>	18756022
P29474	534	<i>H. sapiens</i>	18756022
P29474	556	<i>H. sapiens</i>	18756022
P29474	609	<i>H. sapiens</i>	18756022
P29474	657	<i>H. sapiens</i>	18756022
P29474	793	<i>H. sapiens</i>	18756022
P29474	939	<i>H. sapiens</i>	18756022
P29474	940	<i>H. sapiens</i>	18756022
P29474	962	<i>H. sapiens</i>	18756022
P29474	973	<i>H. sapiens</i>	18756022
P29474	1087	<i>H. sapiens</i>	18756022
P29474	1155	<i>H. sapiens</i>	18756022
P29692	26	<i>H. sapiens</i>	19741252
P30086	64	<i>H. sapiens</i>	19741252
P30086	106	<i>H. sapiens</i>	17497906
P30101	67	<i>H. sapiens</i>	19741252
P30101	100	<i>H. sapiens</i>	19741252
P31948	354	<i>H. sapiens</i>	19741252
P32969	180	<i>H. sapiens</i>	19741252
P33993	21	<i>H. sapiens</i>	19741252
P34913	383	<i>H. sapiens</i>	19704161
P34913	466	<i>H. sapiens</i>	19704161
P34932	336	<i>H. sapiens</i>	19741252
P35080	99	<i>H. sapiens</i>	19741252
P35228	299	<i>H. sapiens</i>	12097137
P35228	336	<i>H. sapiens</i>	12097137
P35228	446	<i>H. sapiens</i>	12097137
P35228	698	<i>H. sapiens</i>	12097137
P35247	248	<i>H. sapiens</i>	19126597
P35247	326	<i>H. sapiens</i>	19126597
P35247	334	<i>H. sapiens</i>	19126597
P35250	322	<i>H. sapiens</i>	19741252
P35520	223	<i>H. sapiens</i>	19733148

P35606	794	<i>H. sapiens</i>	19741252
P35637	468	<i>H. sapiens</i>	19741252
P35998	4	<i>H. sapiens</i>	19741252
P36578	184	<i>H. sapiens</i>	19741252
P36578	277	<i>H. sapiens</i>	19741252
P36776	473	<i>H. sapiens</i>	19741252
P36959	318	<i>H. sapiens</i>	19741252
P37802	192	<i>H. sapiens</i>	19741252
P37837	206	<i>H. sapiens</i>	19741252
P37840	39	<i>H. sapiens</i>	11062131;12031537;19697948;15699043;17497906
P37840	125	<i>H. sapiens</i>	11062131;12031537;19697948
P37840	133	<i>H. sapiens</i>	11062131;12031537;19697948
P37840	136	<i>H. sapiens</i>	11062131;12031537;19697948
P38159	304	<i>H. sapiens</i>	19741252
P38646	196	<i>H. sapiens</i>	12821649
P38646	652	<i>H. sapiens</i>	19741252
P40926	56	<i>H. sapiens</i>	17497906;18708664
P40926	80	<i>H. sapiens</i>	18708664
P40926	161	<i>H. sapiens</i>	19741252
P41252	409	<i>H. sapiens</i>	19741252
P42704	1321	<i>H. sapiens</i>	19741252
P43243	202	<i>H. sapiens</i>	19741252
P45452	338	<i>H. sapiens</i>	18495757
P46459	294	<i>H. sapiens</i>	19741252
P46779	77	<i>H. sapiens</i>	19741252
P47813	106	<i>H. sapiens</i>	19741252
P49207	13	<i>H. sapiens</i>	19741252
P49321	540	<i>H. sapiens</i>	19741252
P49368	247	<i>H. sapiens</i>	19741252
P49368	359	<i>H. sapiens</i>	19741252
P49458	51	<i>H. sapiens</i>	19741252
P49588	690	<i>H. sapiens</i>	19741252
P50395	111	<i>H. sapiens</i>	19741252
P50395	229	<i>H. sapiens</i>	17497906
P50990	304	<i>H. sapiens</i>	19741252
P50990	468	<i>H. sapiens</i>	19741252
P50991	269	<i>H. sapiens</i>	19741252
P50991	282	<i>H. sapiens</i>	19741252
P51149	28	<i>H. sapiens</i>	19741252
P52272	64	<i>H. sapiens</i>	19741252
P52566	24	<i>H. sapiens</i>	19741252
P53041	434	<i>H. sapiens</i>	19741252
P53396	213	<i>H. sapiens</i>	19741252
P53396	227	<i>H. sapiens</i>	19741252
P53396	384	<i>H. sapiens</i>	19741252
P55072	644	<i>H. sapiens</i>	19741252
P55769	11	<i>H. sapiens</i>	19741252
P55884	449	<i>H. sapiens</i>	19741252
P60468	59	<i>H. sapiens</i>	19741252
P60842	70	<i>H. sapiens</i>	19741252
P60842	197	<i>H. sapiens</i>	19741252
P61088	76	<i>H. sapiens</i>	19741252
P61158	16	<i>H. sapiens</i>	19741252

P61221	155	<i>H. sapiens</i>	19741252
P61221	594	<i>H. sapiens</i>	19741252
P61247	155	<i>H. sapiens</i>	19741252
P61604	88	<i>H. sapiens</i>	19741252
P61927	27	<i>H. sapiens</i>	19741252
P61978	72	<i>H. sapiens</i>	19741252
P61978	323	<i>H. sapiens</i>	19741252
P62081	177	<i>H. sapiens</i>	19741252
P62136	255	<i>H. sapiens</i>	19741252
P62158	100	<i>H. sapiens</i>	12693036;204335
P62158	139	<i>H. sapiens</i>	12693036;8011644;204335;212099
P62195	121	<i>H. sapiens</i>	19741252
P62241	83	<i>H. sapiens</i>	19741252
P62241	188	<i>H. sapiens</i>	19741252
P62249	115	<i>H. sapiens</i>	19741252
P62263	72	<i>H. sapiens</i>	19741252
P62273	34	<i>H. sapiens</i>	19741252
P62280	55	<i>H. sapiens</i>	19741252
P62701	82	<i>H. sapiens</i>	19741252
P62750	117	<i>H. sapiens</i>	19741252
P62750	144	<i>H. sapiens</i>	19741252
P62805	52	<i>H. sapiens</i>	19741252;11723112;17497906
P62805	73	<i>H. sapiens</i>	19741252;11723112;17497906
P62805	89	<i>H. sapiens</i>	19741252;11723112;17497906
P62826	147	<i>H. sapiens</i>	19741252
P62910	95	<i>H. sapiens</i>	19741252
P62917	133	<i>H. sapiens</i>	19741252
P62988	59	<i>H. sapiens</i>	16522858;19741252
P62993	209	<i>H. sapiens</i>	19741252
P63220	12	<i>H. sapiens</i>	19741252
P63244	52	<i>H. sapiens</i>	19741252
P67775	284	<i>H. sapiens</i>	20100830
P68104	29	<i>H. sapiens</i>	19741252
P68104	254	<i>H. sapiens</i>	19741252
P68871	131	<i>H. sapiens</i>	10828987;11735412;18161731
P68871	146	<i>H. sapiens</i>	17497906
P69905	25	<i>H. sapiens</i>	10828987;11735412;18161731;17497906
P69905	43	<i>H. sapiens</i>	10828987;11735412;18161731;17497906;18708664
P69905	141	<i>H. sapiens</i>	10828987;11735412;18161731
P78344	751	<i>H. sapiens</i>	19741252
P78371	213	<i>H. sapiens</i>	19741252
P78417	108	<i>H. sapiens</i>	19741252
P83731	11	<i>H. sapiens</i>	19741252
P84103	32	<i>H. sapiens</i>	19741252
Q00325	196	<i>H. sapiens</i>	19741252
Q00610	377	<i>H. sapiens</i>	19741252
Q00610	883	<i>H. sapiens</i>	19741252
Q00610	921	<i>H. sapiens</i>	17497906
Q00610	1237	<i>H. sapiens</i>	17497906
Q00839	525	<i>H. sapiens</i>	19741252
Q01130	3	<i>H. sapiens</i>	19741252
Q01518	419	<i>H. sapiens</i>	19741252

Q02297-6	208	<i>H. sapiens</i>	16980377
Q02297-6	224	<i>H. sapiens</i>	16980377
Q02297-6	230	<i>H. sapiens</i>	16980377
Q02543	110	<i>H. sapiens</i>	19741252
Q02790	202	<i>H. sapiens</i>	19741252
Q02878	240	<i>H. sapiens</i>	19741252
Q03405	79	<i>H. sapiens</i>	7548000
Q03405	109	<i>H. sapiens</i>	7548000
Q03405	114	<i>H. sapiens</i>	7548000
Q03405	171	<i>H. sapiens</i>	7548000
Q03405	217	<i>H. sapiens</i>	7548000
Q03405	258	<i>H. sapiens</i>	7548000
Q04206	66	<i>H. sapiens</i>	15657065
Q04206	152	<i>H. sapiens</i>	15657065
Q04837	73	<i>H. sapiens</i>	19741252
Q06547	126	<i>H. sapiens</i>	19741252
Q06830	194	<i>H. sapiens</i>	19741252
Q07955	37	<i>H. sapiens</i>	19741252
Q07955	170	<i>H. sapiens</i>	19741252
Q07955	189	<i>H. sapiens</i>	19741252
Q08170	132	<i>H. sapiens</i>	19741252
Q08211	200	<i>H. sapiens</i>	19741252
Q08J23	646	<i>H. sapiens</i>	19741252
Q09028	154	<i>H. sapiens</i>	19741252
Q12906	579	<i>H. sapiens</i>	19741252
Q12996	13	<i>H. sapiens</i>	19741252
Q12996	159	<i>H. sapiens</i>	19741252
Q13148	155	<i>H. sapiens</i>	19741252
Q13237	354	<i>H. sapiens</i>	15555551
Q13257	199	<i>H. sapiens</i>	19741252
Q13263	242	<i>H. sapiens</i>	19741252
Q13263	517	<i>H. sapiens</i>	19741252
Q13347	308	<i>H. sapiens</i>	19741252
Q13451	218	<i>H. sapiens</i>	19741252
Q13547	87	<i>H. sapiens</i>	19741252
Q13573	448	<i>H. sapiens</i>	19741252
Q13765	120	<i>H. sapiens</i>	19741252
Q13813	72	<i>H. sapiens</i>	19741252
Q13813	942	<i>H. sapiens</i>	17497906
Q13813	976	<i>H. sapiens</i>	19741252
Q13813	1261	<i>H. sapiens</i>	17497906
Q13813	1517	<i>H. sapiens</i>	17497906
Q13813	2423	<i>H. sapiens</i>	18708664
Q13936	2217	<i>H. sapiens</i>	17942635
Q13976	345	<i>H. sapiens</i>	19487814
Q13976	549	<i>H. sapiens</i>	19487814
Q14204	627	<i>H. sapiens</i>	19741252
Q14204	3641	<i>H. sapiens</i>	17497906
Q14566	598	<i>H. sapiens</i>	19741252
Q14683	105	<i>H. sapiens</i>	19741252

Q14683	575	<i>H. sapiens</i>	19741252
Q14694	615	<i>H. sapiens</i>	19741252
Q14847	257	<i>H. sapiens</i>	19741252
Q15019	129	<i>H. sapiens</i>	19741252
Q15056	12	<i>H. sapiens</i>	19741252
Q15056	86	<i>H. sapiens</i>	19741252
Q15056	101	<i>H. sapiens</i>	19741252
Q15181	17	<i>H. sapiens</i>	19741252
Q15181	169	<i>H. sapiens</i>	19741252
Q15365	183	<i>H. sapiens</i>	19741252
Q15370	45	<i>H. sapiens</i>	19741252
Q15393	1029	<i>H. sapiens</i>	19741252
Q15427	16	<i>H. sapiens</i>	19741252
Q15428	54	<i>H. sapiens</i>	19741252
Q15428	155	<i>H. sapiens</i>	19741252
Q15459	44	<i>H. sapiens</i>	19741252
Q15459	456	<i>H. sapiens</i>	19741252
Q16539- 2	132	<i>H. sapiens</i>	16878296
Q16539- 2	245	<i>H. sapiens</i>	16878296
Q16539- 2	258	<i>H. sapiens</i>	16878296
Q16595	143	<i>H. sapiens</i>	19853582
Q16595	175	<i>H. sapiens</i>	19853582
Q16595	205	<i>H. sapiens</i>	19853582
Q16629	14	<i>H. sapiens</i>	19741252
Q16647	430	<i>H. sapiens</i>	16115610;12562775
Q16695	42	<i>H. sapiens</i>	19741252;11723112;
Q16891	33	<i>H. sapiens</i>	19741252
Q3MHD2	8	<i>H. sapiens</i>	19741252
Q52LJ0	25	<i>H. sapiens</i>	19741252
Q58FF8	56	<i>H. sapiens</i>	19741252
Q58FF8	198	<i>H. sapiens</i>	19741252
Q58FF8	260	<i>H. sapiens</i>	19741252
Q5JTV8	203	<i>H. sapiens</i>	19741252
Q6P2Q9	1204	<i>H. sapiens</i>	19741252
Q71U36	83	<i>H. sapiens</i>	16800626
Q71U36	103	<i>H. sapiens</i>	17497906
Q71U36	108	<i>H. sapiens</i>	17497906;18708664
Q71U36	161	<i>H. sapiens</i>	19741252;15887183
Q71U36	224	<i>H. sapiens</i>	19741252;17497906;16257120
Q71U36	262	<i>H. sapiens</i>	17497906
Q71U36	272	<i>H. sapiens</i>	17497906
Q71U36	282	<i>H. sapiens</i>	16800626
Q71U36	357	<i>H. sapiens</i>	19741252;17497906;15887183
Q71U36	451	<i>H. sapiens</i>	10339593
Q71UM5	31	<i>H. sapiens</i>	19741252
Q7KZF4	329	<i>H. sapiens</i>	19741252
Q7L014	1020	<i>H. sapiens</i>	19741252
Q86VP6	723	<i>H. sapiens</i>	19741252
Q8IWL2	181	<i>H. sapiens</i>	10781434
Q8IWL2	184	<i>H. sapiens</i>	8914938;10781434

Q8IWL2	186	<i>H. sapiens</i>	8914938;10781434
Q8IWL2	240	<i>H. sapiens</i>	8914938;10781434
Q8IXH7	56	<i>H. sapiens</i>	19741252
Q8N684	408	<i>H. sapiens</i>	19741252
Q8NHL6	58	<i>H. sapiens</i>	19583775
Q8NHL6	99	<i>H. sapiens</i>	19583775
Q8NHL6	100	<i>H. sapiens</i>	19583775
Q8NHL6	122	<i>H. sapiens</i>	19583775
Q8NHL6	252	<i>H. sapiens</i>	19583775
Q8NHL6	378	<i>H. sapiens</i>	19583775
Q8NHL6	406	<i>H. sapiens</i>	16777052
Q8NHW	24	<i>H. sapiens</i>	19741252
Q92526	250	<i>H. sapiens</i>	19741252
Q92900	946	<i>H. sapiens</i>	19741252
Q92922	66	<i>H. sapiens</i>	19741252
Q96AE4	438	<i>H. sapiens</i>	19741252
Q96IX5	10	<i>H. sapiens</i>	19741252
Q96PK6	273	<i>H. sapiens</i>	19741252
Q96QR8	254	<i>H. sapiens</i>	19741252
Q99614	188	<i>H. sapiens</i>	19741252
Q99727	114	<i>H. sapiens</i>	18336787
Q99727	188	<i>H. sapiens</i>	18336787
Q99727	190	<i>H. sapiens</i>	18336787
Q99727	195	<i>H. sapiens</i>	18336787
Q99832	222	<i>H. sapiens</i>	19741252
Q9BUJ2	729	<i>H. sapiens</i>	19741252
Q9BWJ5	18	<i>H. sapiens</i>	19741252
Q9BZK7	13	<i>H. sapiens</i>	19741252
Q9H074	386	<i>H. sapiens</i>	19741252
Q9H0D6	764	<i>H. sapiens</i>	19741252
Q9H3K2	308	<i>H. sapiens</i>	19741252
Q9H3K6	7	<i>H. sapiens</i>	19741252
Q9NPD3	12	<i>H. sapiens</i>	19741252
Q9NR30	434	<i>H. sapiens</i>	19741252
Q9NR45	71	<i>H. sapiens</i>	19741252
Q9NUV9	290	<i>H. sapiens</i>	19741252
Q9NYF8	322	<i>H. sapiens</i>	19741252
Q9NZ32	4	<i>H. sapiens</i>	19741252
Q9P2J5	336	<i>H. sapiens</i>	19741252
Q9UHB9	364	<i>H. sapiens</i>	19741252
Q9UHD1	292	<i>H. sapiens</i>	19741252
Q9UI10	147	<i>H. sapiens</i>	19741252
Q9UKK9	36	<i>H. sapiens</i>	19741252
Q9UKY7	95	<i>H. sapiens</i>	19741252
Q9UL46	187	<i>H. sapiens</i>	19741252
Q9UN86	29	<i>H. sapiens</i>	19741252
Q9UNZ2	167	<i>H. sapiens</i>	19741252
Q9Y230	430	<i>H. sapiens</i>	19741252
Q9Y285	292	<i>H. sapiens</i>	19741252
Q9Y2W1	710	<i>H. sapiens</i>	19741252
Q9Y2W2	124	<i>H. sapiens</i>	19741252
Q9Y2W2	173	<i>H. sapiens</i>	19741252
Q9Y314	28	<i>H. sapiens</i>	19741252

Q9Y3F4	114	<i>H. sapiens</i>	19741252
Q9Y3U8	5	<i>H. sapiens</i>	19741252
Q9Y6A4	184	<i>H. sapiens</i>	19741252
O94892	41	<i>H. sapiens</i>	16777052
O95470	356	<i>H. sapiens</i>	16777052
O95470	366	<i>H. sapiens</i>	16777052
P25787	229	<i>H. sapiens</i>	16777052
P31321	21	<i>H. sapiens</i>	16777052
P50502	185	<i>H. sapiens</i>	19741252
P50502	213	<i>H. sapiens</i>	19741252
P61513	37	<i>H. sapiens</i>	19741252
Q13017	550	<i>H. sapiens</i>	16777052
Q15027	485	<i>H. sapiens</i>	16777052
Q15413	2577	<i>H. sapiens</i>	15851474
Q8IUC4	258	<i>H. sapiens</i>	16777052
Q9UHA7	96	<i>H. sapiens</i>	16777052
O00151	321	<i>H. sapiens</i>	19741252
O00165	132	<i>H. sapiens</i>	19741252
O00232	174	<i>H. sapiens</i>	19741252
O00483	62	<i>H. sapiens</i>	19741252
O14737	73	<i>H. sapiens</i>	19741252
O14744	179	<i>H. sapiens</i>	19741252
O14976	1284	<i>H. sapiens</i>	19741252
O14979	295	<i>H. sapiens</i>	19741252
O43143	323	<i>H. sapiens</i>	19741252
O43252	537	<i>H. sapiens</i>	19741252
O43290	390	<i>H. sapiens</i>	19741252
O43615	201	<i>H. sapiens</i>	19741252
O43660	77	<i>H. sapiens</i>	19741252
O43684	169	<i>H. sapiens</i>	19741252
O43684	207	<i>H. sapiens</i>	19741252
O43709	272	<i>H. sapiens</i>	19741252
O43719	327	<i>H. sapiens</i>	19741252
O43765	195	<i>H. sapiens</i>	19741252
O43776	45	<i>H. sapiens</i>	19741252
O43776	489	<i>H. sapiens</i>	19741252
O43852	275	<i>H. sapiens</i>	19741252
O60256	52	<i>H. sapiens</i>	19741252
O60506	373	<i>H. sapiens</i>	19741252
O60641	237	<i>H. sapiens</i>	15555551
O60884	54	<i>H. sapiens</i>	19741252
O75083	398	<i>H. sapiens</i>	19741252
O75347	94	<i>H. sapiens</i>	19741252
O75390	185	<i>H. sapiens</i>	19741252
O75390	345	<i>H. sapiens</i>	17497906
O75396	33	<i>H. sapiens</i>	19741252
O75792	172	<i>H. sapiens</i>	19741252
O75832	138	<i>H. sapiens</i>	19741252
O75947	86	<i>H. sapiens</i>	12857734
O75947	115	<i>H. sapiens</i>	17514685
O94903	69	<i>H. sapiens</i>	19741252
O95466	90	<i>H. sapiens</i>	19741252
P01654	90	<i>M. musculus</i>	17615369



P01864	292	<i>M. musculus</i>	17615369
P04370	146	<i>M. musculus</i>	17497906;18708664
P04370	199	<i>M. musculus</i>	17497906
P05064	5	<i>M. musculus</i>	17497906
P05064	174	<i>M. musculus</i>	16800626;18708664
P05201	71	<i>M. musculus</i>	17497906
P05202	67	<i>M. musculus</i>	16800626
P05202	96	<i>M. musculus</i>	17497906
P05202	316	<i>M. musculus</i>	17497906
P07724	60	<i>M. musculus</i>	17615369
P07724	365	<i>M. musculus</i>	17615369
P07724	425	<i>M. musculus</i>	17615369
P08551	18	<i>M. musculus</i>	9349539
P08551	139	<i>M. musculus</i>	9349539
P08551	178	<i>M. musculus</i>	9349539
P08551	266	<i>M. musculus</i>	9349539
P08551	369	<i>M. musculus</i>	18708664
P08553	148	<i>M. musculus</i>	17497906
P10649	7	<i>M. musculus</i>	11594736
P10649	23	<i>M. musculus</i>	11594736
P10649	28	<i>M. musculus</i>	11594736
P10649	33	<i>M. musculus</i>	11594736
P10649	62	<i>M. musculus</i>	11594736
P10649	79	<i>M. musculus</i>	11594736
P10649	138	<i>M. musculus</i>	11594736
P10649	161	<i>M. musculus</i>	17497906
P10853	38	<i>M. musculus</i>	11723112
P10853	41	<i>M. musculus</i>	11723112
P10853	43	<i>M. musculus</i>	11723112;19741252
P14094	205	<i>M. musculus</i>	18708664
P14206	139	<i>M. musculus</i>	16800626
P15105	336	<i>M. musculus</i>	15830392;16025504
P15105	349	<i>M. musculus</i>	17497906
P15105	371	<i>M. musculus</i>	17497906
P16858	92	<i>M. musculus</i>	15851474
P16858	253	<i>M. musculus</i>	14607522
P16858	316	<i>M. musculus</i>	17497906
P17183	44	<i>M. musculus</i>	17497906
P17183	252	<i>M. musculus</i>	17497906
P17183	270	<i>M. musculus</i>	17497906
P17751	68	<i>M. musculus</i>	16800626
P17751	165	<i>M. musculus</i>	17497906
P17751	209	<i>M. musculus</i>	16800626
P18531	51	<i>M. musculus</i>	7171542
P18531	52	<i>M. musculus</i>	7171542
P18872	69	<i>M. musculus</i>	18708664
P19246	358	<i>M. musculus</i>	17497906
P19783	44	<i>M. musculus</i>	17497906;18708664
P21803	656	<i>M. musculus</i>	17898259;18165258
P30275	116	<i>M. musculus</i>	17497906
P30275	313	<i>M. musculus</i>	16800626;17497906
P35441	1120	<i>M. musculus</i>	17497906
P35441	1126	<i>M. musculus</i>	17497906

P39053	125	<i>M. musculus</i>	16800626
P39053	265	<i>M. musculus</i>	17497906
P39053	354	<i>M. musculus</i>	17497906
P40142	275	<i>M. musculus</i>	17497906
P41588	159	<i>M. musculus</i>	16800626
P50114	18	<i>M. musculus</i>	17497906
P50153	44	<i>M. musculus</i>	17497906
P50516	601	<i>M. musculus</i>	17497906
P56387	4	<i>M. musculus</i>	16800626
P58281	808	<i>M. musculus</i>	17497906
P60202	207	<i>M. musculus</i>	18708664
P60710	53	<i>M. musculus</i>	19741252;12401783
P60710	69	<i>M. musculus</i>	128459
P60710	91	<i>M. musculus</i>	12401783;17497906
P60710	169	<i>M. musculus</i>	17497906
P60710	188	<i>M. musculus</i>	19741252
P60710	198	<i>M. musculus</i>	12401783;19741252
P60710	218	<i>M. musculus</i>	16800626;15851474
P60710	240	<i>M. musculus</i>	12401783;19741252;17497906
P60710	294	<i>M. musculus</i>	12401783;19741252;15555551
P60710	362	<i>M. musculus</i>	12401783;19741252
P61922-	370	<i>M. musculus</i>	17497906
P62259	9	<i>M. musculus</i>	19741252
P62259	49	<i>M. musculus</i>	17497906
P62259	85	<i>M. musculus</i>	16800626
P62259	131	<i>M. musculus</i>	18708664;19741252
P62259	214	<i>M. musculus</i>	17497906;19741252
P62814	68	<i>M. musculus</i>	17497906
P62814	504	<i>M. musculus</i>	17497906
P63168	50	<i>M. musculus</i>	17497906
P63328	224	<i>M. musculus</i>	16800626
P67778	249	<i>M. musculus</i>	17497906
P70338	256	<i>M. musculus</i>	17898259
P85094	61	<i>M. musculus</i>	17497906
P97427	290	<i>M. musculus</i>	15699043
P97427	316	<i>M. musculus</i>	16800626
P98063	616	<i>M. musculus</i>	17497906
Q02780-	2	<i>M. musculus</i>	16800626
2			
Q04447	39	<i>M. musculus</i>	15699043;17497906
Q04447	269	<i>M. musculus</i>	16800626
Q08122	40	<i>M. musculus</i>	17898259
Q11011	465	<i>M. musculus</i>	16800626
Q3ULF4	505	<i>M. musculus</i>	16800626
Q3UYC0	262	<i>M. musculus</i>	17497906
Q60865	152	<i>M. musculus</i>	17497906
Q61644	437	<i>M. musculus</i>	17497906
Q61656	97	<i>M. musculus</i>	16800626
Q616G8	208	<i>M. musculus</i>	17497906
Q6PIC6	45	<i>M. musculus</i>	17497906;18708664
Q6PIC6	532	<i>M. musculus</i>	17497906
Q6ZQ93	2286	<i>M. musculus</i>	17615369
Q7TMM9	36	<i>M. musculus</i>	17497906

Q7TMM9	51	<i>M. musculus</i>	17497906
Q7TMM9	106	<i>M. musculus</i>	18708664;17497906
Q7TMM9	222	<i>M. musculus</i>	18708664;17497906
Q80VM8	374	<i>M. musculus</i>	17497906
Q80YV4	320	<i>M. musculus</i>	16800626
Q8BH59	302	<i>M. musculus</i>	17497906
Q8BN78	491	<i>M. musculus</i>	17497906
Q8BN78	492	<i>M. musculus</i>	17497906
Q8BUE4	252	<i>M. musculus</i>	17898259
Q8BVE3	417	<i>M. musculus</i>	17497906
Q8CJG0	2	<i>M. musculus</i>	16800626
Q8K0T0	753	<i>M. musculus</i>	17497906
Q8K1M6	455	<i>M. musculus</i>	17497906
-2			
Q8QZT1	328	<i>M. musculus</i>	17497906
Q8R5C5	4	<i>M. musculus</i>	16800626
Q91VD9	636	<i>M. musculus</i>	17497906
Q91YM2	477	<i>M. musculus</i>	17497906
Q920Q4	4	<i>M. musculus</i>	16800626
Q99JX7	125	<i>M. musculus</i>	16800626
Q99LC5	105	<i>M. musculus</i>	15345482;16291231
Q99LC5	235	<i>M. musculus</i>	17497906
Q9CQV8	84	<i>M. musculus</i>	16800626
Q9CQV8	106	<i>M. musculus</i>	16800626
Q9CQV8	213	<i>M. musculus</i>	17497906
Q9CZC8	293	<i>M. musculus</i>	17497906
Q9D0K2	43	<i>M. musculus</i>	20527992
Q9D0K2	115	<i>M. musculus</i>	20527992
Q9D6J6	69	<i>M. musculus</i>	17497906
Q9D855	56	<i>M. musculus</i>	17497906
Q9D974	82	<i>M. musculus</i>	17497906
Q9DB20	35	<i>M. musculus</i>	17497906
Q9DBG3	707	<i>M. musculus</i>	17497906
Q9JIS5	511	<i>M. musculus</i>	18708664
Q9NRM2	99	<i>M. musculus</i>	17898259
Q9NRM2	102	<i>M. musculus</i>	17898259
Q9QUH6	505	<i>M. musculus</i>	18708664
Q9QWH	593	<i>M. musculus</i>	17898259
1			
Q9QYG0	68	<i>M. musculus</i>	17497906
Q9WUQ	10	<i>M. musculus</i>	16800626
2			
Q9Z188	129	<i>M. musculus</i>	17497906
B2RSH2	167	<i>M. musculus</i>	17497906
O08530	19	<i>M. musculus</i>	17615369
O08553	182	<i>M. musculus</i>	17497906
O08553	431	<i>M. musculus</i>	17497906
O08585	146	<i>M. musculus</i>	17497906
O35633	186	<i>M. musculus</i>	16800626
O35643	574	<i>M. musculus</i>	16800626
O35652	153	<i>M. musculus</i>	17898259
O35678	58	<i>M. musculus</i>	16800626;18708664
O88990	292	<i>M. musculus</i>	17615369

P60301	32	<i>N. atra</i>	28149;
P60301	43	<i>N. atra</i>	28149;7417487;3569641;3442644
P60301	72	<i>N. atra</i>	28149;7417487;3569641;3442644
P60770	46	<i>N. atra</i>	1384491
P60770	56	<i>N. atra</i>	1384491
P01448	22	<i>N. melanoleuca</i>	7417487;3569641
P01448	25	<i>N. melanoleuca</i>	7417487;3569641
P01448	51	<i>N. melanoleuca</i>	7417487;3569641
P01426	24	<i>N. melanoleuca</i>	2252887
P00369	169	<i>N. crassa</i>	239946
P01387	4	<i>O. hannah</i>	10727106
P01387	22	<i>O. hannah</i>	10727106
P00187	72	<i>O. cuniculus</i>	3120780;3202847
P00187	189	<i>O. cuniculus</i>	3120780;3202847
P00187	244	<i>O. cuniculus</i>	3120780;3202847
P00187	272	<i>O. cuniculus</i>	3120780;3202847
P00187	367	<i>O. cuniculus</i>	3120780;3202847
P00489	75	<i>O. cuniculus</i>	17689562
P00489	76	<i>O. cuniculus</i>	3111849;17689562
P00489	84	<i>O. cuniculus</i>	17689562
P00489	85	<i>O. cuniculus</i>	17689562;19146822
P00489	91	<i>O. cuniculus</i>	17689562
P00489	114	<i>O. cuniculus</i>	15851474
P00489	162	<i>O. cuniculus</i>	19146822
P00489	186	<i>O. cuniculus</i>	19146822
P00489	204	<i>O. cuniculus</i>	3111849;19146822
P00489	227	<i>O. cuniculus</i>	19146822
P00489	234	<i>O. cuniculus</i>	19146822
P00489	263	<i>O. cuniculus</i>	3111849;19146822
P00489	281	<i>O. cuniculus</i>	3111849;19146822
P00489	298	<i>O. cuniculus</i>	19146822
P00489	405	<i>O. cuniculus</i>	3111849;19146822
P00489	473	<i>O. cuniculus</i>	19146822
P00489	512	<i>O. cuniculus</i>	19146822
P00489	525	<i>O. cuniculus</i>	19146822
P00489	549	<i>O. cuniculus</i>	19146822
P00489	554	<i>O. cuniculus</i>	3111849
P00489	614	<i>O. cuniculus</i>	17689562;19146822
P00489	649	<i>O. cuniculus</i>	3111849;19146822
P00489	727	<i>O. cuniculus</i>	19146822
P00489	778	<i>O. cuniculus</i>	19146822
P00489	781	<i>O. cuniculus</i>	19146822
P00489	792	<i>O. cuniculus</i>	19146822
P00489	821	<i>O. cuniculus</i>	19146822
P00883	204	<i>O. cuniculus</i>	15851474
P00883	223	<i>O. cuniculus</i>	14978198
P00883	244	<i>O. cuniculus</i>	14978198
P00883	328	<i>O. cuniculus</i>	14607522
P00883	343	<i>O. cuniculus</i>	14978198
P00883	364	<i>O. cuniculus</i>	14978198
P01870	154	<i>O. cuniculus</i>	2784672
P02602	60	<i>O. cuniculus</i>	7462207
P02602	127	<i>O. cuniculus</i>	15851474

P02602	182	<i>O. cuniculus</i>	7462207;6223025
P46406	312	<i>O. cuniculus</i>	20014444
P46406	318	<i>O. cuniculus</i>	20014444
P01218	45	<i>O. aries</i>	1245474
P01218	65	<i>O. aries</i>	1245474;19242934
P01218	116	<i>O. aries</i>	1245474
P01218	117	<i>O. aries</i>	1245474
P01240	74	<i>O. aries</i>	889874;434812
P01240	177	<i>O. aries</i>	889874;434812
P01240	199	<i>O. aries</i>	889874;434812
P01240	215	<i>O. aries</i>	889874;434812
P01240	225	<i>O. aries</i>	889874;434812
P05979	355	<i>O. aries</i>	2122967
P05979	385	<i>O. aries</i>	16400036;16470026;2122967;9535872
P05979	417	<i>O. aries</i>	2122967
P16038	84	<i>O. aries</i>	8639711
Q51918	359	<i>P. magnus</i>	11139405
Q51918	361	<i>P. magnus</i>	11139405
Q51918	372	<i>P. magnus</i>	11139405
P02244	19	<i>P. gouldii</i>	1252457
P02244	68	<i>P. gouldii</i>	1252457
P02244	71	<i>P. gouldii</i>	1252457
P02185	104	<i>P. catodon</i>	15174864
P02185	147	<i>P. catodon</i>	15174864
P02185	152	<i>P. catodon</i>	15174864
P00183	97	<i>P. putida</i>	6532454;11051566
P00183	180	<i>P. putida</i>	6532454;11051566
P00183	202	<i>P. putida</i>	6532454;11051566
P00183	204	<i>P. putida</i>	6532454;11051566
P00183	306	<i>P. putida</i>	6532454;11051566
P00564	14	<i>R. norvegicus</i>	15851474;16291231
P00564	20	<i>R. norvegicus</i>	15851474
P00564	39	<i>R. norvegicus</i>	14607522
P00773	53	<i>R. norvegicus</i>	17898259
P02564	134	<i>R. norvegicus</i>	17481840
P02564	142	<i>R. norvegicus</i>	17481840
P04177	423	<i>R. norvegicus</i>	11590168;11834745;12703971
P04177	428	<i>R. norvegicus</i>	11590168;11834745;12703971
P04177	432	<i>R. norvegicus</i>	11590168;11834745;12703971
P04692	214	<i>R. norvegicus</i>	15851474
P04764	131	<i>R. norvegicus</i>	20079428
P04764	257	<i>R. norvegicus</i>	20079428
P07825	250	<i>R. norvegicus</i>	19737347
P08011	93	<i>R. norvegicus</i>	16314419
P08011	154	<i>R. norvegicus</i>	16314419
P10066	17	<i>R. norvegicus</i>	18165258
P11507-	122	<i>R. norvegicus</i>	16185075
P11507-	130	<i>R. norvegicus</i>	16185075
P11507-	294	<i>R. norvegicus</i>	10359649;16185075
P11507-	295	<i>R. norvegicus</i>	10359649;16185075
P11507-	497	<i>R. norvegicus</i>	16185075
P11507-	586	<i>R. norvegicus</i>	16185075
P11507-	753	<i>R. norvegicus</i>	10359649;16185075

P11507-	990	<i>R. norvegicus</i>	16185075
P18163	9	<i>R. norvegicus</i>	17478130
P18163	86	<i>R. norvegicus</i>	17478130
P19357	56	<i>R. norvegicus</i>	18165258
P21807	17	<i>R. norvegicus</i>	17268851
P21807	376	<i>R. norvegicus</i>	17268851
P32198	282	<i>R. norvegicus</i>	17478130
P32198	589	<i>R. norvegicus</i>	17478130
P35570	489	<i>R. norvegicus</i>	15240096
P35570	939	<i>R. norvegicus</i>	15240096
P35570	999	<i>R. norvegicus</i>	15240096
P35570	1010	<i>R. norvegicus</i>	15240096
P35570	1172	<i>R. norvegicus</i>	15240096
P48548	53	<i>R. norvegicus</i>	18165258
P52504	106	<i>R. norvegicus</i>	17481840
P56574	311	<i>R. norvegicus</i>	14551203
P70623	20	<i>R. norvegicus</i>	19135148
P98158	4407	<i>R. norvegicus</i>	17254026
Q62673	481	<i>R. norvegicus</i>	18165258
Q62886	289	<i>R. norvegicus</i>	17481840
Q63269	352	<i>R. norvegicus</i>	18165258
Q63544	39	<i>R. norvegicus</i>	18165258
Q64455	1034	<i>R. norvegicus</i>	18165258
Q91YE5	1882	<i>R. norvegicus</i>	18165258
Q923K9	83	<i>R. norvegicus</i>	18165258
Q9CR40	322	<i>R. norvegicus</i>	18165258
Q9JKL9	214	<i>R. norvegicus</i>	18165258
Q9QYP2	465	<i>R. norvegicus</i>	17481840
Q07008	1175	<i>R. norvegicus</i>	15851474
Q07008	1205	<i>R. norvegicus</i>	15851474
Q07008	1905	<i>R. norvegicus</i>	18411251
Q9QXQ0	260	<i>R. norvegicus</i>	15851474
O15229	37	<i>R. norvegicus</i>	18165258
O54922	409	<i>R. norvegicus</i>	18165258
O88457	5	<i>R. norvegicus</i>	18165258
O88457	6	<i>R. norvegicus</i>	18165258
O88943	226	<i>R. norvegicus</i>	18165258
O24819	116	<i>R. rhodochrous</i>	10502672
P00924	191	<i>S. cerevisiae</i>	20079428
P00924	259	<i>S. cerevisiae</i>	20079428
P04806	308	<i>S. cerevisiae</i>	17051422
P04806	309	<i>S. cerevisiae</i>	17051422
P04806	340	<i>S. cerevisiae</i>	17051422
P04806	346	<i>S. cerevisiae</i>	17051422
P32178	234	<i>S. cerevisiae</i>	8218394
P35809	97	<i>S. commune</i>	7849058
P00644	197	<i>S. aureus</i>	234457
P00807	96	<i>S. aureus</i>	629760
P0A0E3	6	<i>S. aureus</i>	456367
P0A0E3	37	<i>S. aureus</i>	456367
P01006	38	<i>S. albogriseolus</i>	7011365
P01006	106	<i>S. albogriseolus</i>	7011365
P15444	35	<i>S. camelus</i>	1428529

P00592	91	<i>S. scrofa</i>	681357
P00592	145	<i>S. scrofa</i>	681357
P01315	40	<i>S. scrofa</i>	19075816
P01315	50	<i>S. scrofa</i>	17121419;19075816
P01315	101	<i>S. scrofa</i>	17121419
P01315	106	<i>S. scrofa</i>	17121419;19075816
P02703	72	<i>S. scrofa</i>	6615844
P02703	75	<i>S. scrofa</i>	6615844
P02703	76	<i>S. scrofa</i>	6615844
P09955	197	<i>S. scrofa</i>	19717511
P09955	306	<i>S. scrofa</i>	19717511
P09955	316	<i>S. scrofa</i>	19717511
P09955	348	<i>S. scrofa</i>	568547
P09955	356	<i>S. scrofa</i>	5064743;19717511
P09955	367	<i>S. scrofa</i>	568547
P09955	385	<i>S. scrofa</i>	19717511
P16276	71	<i>S. scrofa</i>	17497906
P16276	151	<i>S. scrofa</i>	16142896
P16276	472	<i>S. scrofa</i>	16142896
P61013	6	<i>S. scrofa</i>	12962492
Q5SIY4	36	<i>T. thermophilus</i>	8140100
P69687	140	<i>T. mosaic virus</i>	18639834
P06859	80	<i>T. flavoviridis</i>	10545203
P06859	82	<i>T. flavoviridis</i>	3273223;10545203
P06859	118	<i>T. flavoviridis</i>	10545203

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**Supplementary Table S2** – From large-scale and small-scale experimental studies, we also collected 370 potentially nitrated substrates. The exact nitration sites had still not been experimentally determined. The default threshold (medium) was adopted for GPS-YNO2 1.0.

UniProt	Predicted nitration sites	Organism	PMID
Q9SDP1	14	<i>A. cepa</i>	19717529
O23223	27, 152	<i>A. thaliana</i>	19717529
O23715	99	<i>A. thaliana</i>	19717529
O81147	125, 191	<i>A. thaliana</i>	19717529
Q9FFX7	139, 377, 433, 545, 588, 621, 703, 758, 1005	<i>A. thaliana</i>	19717529
Q9SEX2	447	<i>A. thaliana</i>	19717529
P22088	139, 173, 344	<i>B. cepacia</i>	11674331
P06278	8, 468, 509	<i>B. licheniformis</i>	3875315
C4AU44	158	<i>B. mallei</i>	1906885
Q9FEH8	648, 701, 890, 1077, 1278, 1471, 1773	<i>B. napus</i>	19717529
O62698	341, 446, 461	<i>B. taurus</i>	10217520;10329589; 12670882
P00432	447, 512	<i>B. taurus</i>	12083380
P00639	173, 275	<i>B. taurus</i>	12083380
P02584	7, 129	<i>B. taurus</i>	16428297
P04272	147, 151, 188, 199, 316, 318, 333	<i>B. taurus</i>	11802744
P04409	163, 427, 658	<i>B. taurus</i>	15794661
P05980	259	<i>B. taurus</i>	10329589;10429677
P12344	75, 96, 126, 316, 420	<i>B. taurus</i>	1172445
P23726	13, 74, 424, 445, 449, 460, 463, 501, 573, 619	<i>B. taurus</i>	19815813
P23727	6, 12, 73, 150, 219, 408, 431, 467, 508, 580, 716	<i>B. taurus</i>	19815813
P42028	211	<i>B. taurus</i>	12857734
Q3T165	249, 259	<i>B. taurus</i>	12857734;11593016
Q66LN0	73	<i>B. taurus</i>	10329589
Q9XSC6	20, 39, 82, 174	<i>B. taurus</i>	12504281
P00800	169, 180, 274, 325, 389, 500	<i>B. thermoproteolyticus</i>	4436289
P00588	6, 59, 86, 97, 117, 211, 278, 310, 412, 546	<i>C. beta</i>	65185
Q02307	75, 178, 214, 276, 299, 317, 321	<i>C. perfringens</i>	2884756
P02791	9	<i>E. caballus</i>	4737425
P00811	360	<i>E. coli</i>	6803835
P00816	98	<i>E. coli</i>	3128546
P03695	106	<i>E. phage T4</i>	1103969
P23295	194, 387	<i>F. oxysporum</i>	10729200
P68139	55, 71, 93, 171, 190, 200, 220, 242, 296, 339, 364	<i>G. gallus</i>	12054429
O65352	13, 24, 56, 92, 138, 221	<i>H. annuus</i>	19717529
P14208	30	<i>H. gammarus</i>	177091
O15438	1518	<i>H. sapiens</i>	15695394;18922976
O60674	96, 1021	<i>H. sapiens</i>	19635391
O95169	184	<i>H. sapiens</i>	19897030
P00533	117, 270, 764, 1069	<i>H. sapiens</i>	9822654
P00738	43	<i>H. sapiens</i>	1154943
P01019	147, 390	<i>H. sapiens</i>	9578472;10518791
P01574	81	<i>H. sapiens</i>	678325
P02671	601, 737, 777	<i>H. sapiens</i>	12189015
P02679	94, 122, 140, 375	<i>H. sapiens</i>	12189015



P02730	8, 21, 392, 553, 904	<i>H. sapiens</i>	9409547
P04075	3, 204, 223, 328, 343	<i>H. sapiens</i>	14684358;15345482; 20511553
P04150	30, 89, 332, 545, 660, 693	<i>H. sapiens</i>	12960354
P04406	94, 255, 314	<i>H. sapiens</i>	12675516;11593016; 16378731
P05091	220, 458, 497	<i>H. sapiens</i>	14684358
P07437	36, 51, 106, 222, 425	<i>H. sapiens</i>	14684358
P08107	15, 41, 134, 149, 183, 371, 525, 545	<i>H. sapiens</i>	14684358
P08185	173, 300, 310	<i>H. sapiens</i>	7066412
P08574	321	<i>H. sapiens</i>	12516089
P09104	44, 57, 131, 189, 252, 257, 270	<i>H. sapiens</i>	12787059
P12814	12, 241, 279, 422, 467, 681, 842, 879	<i>H. sapiens</i>	16492779;19895807
P13500	51	<i>H. sapiens</i>	10484461
P13569	38, 247, 512, 1182	<i>H. sapiens</i>	12194970
P16112	1808, 2128	<i>H. sapiens</i>	14715284
P17661	5, 122, 155	<i>H. sapiens</i>	17882015
P18031	66, 153, 427	<i>H. sapiens</i>	10486138
P21399	666, 882	<i>H. sapiens</i>	12820873
P21796	7, 173	<i>H. sapiens</i>	14684358;16378731
P22301	77, 167	<i>H. sapiens</i>	12370394
P22626	41, 135, 174	<i>H. sapiens</i>	14684358
P23141	403	<i>H. sapiens</i>	6691993
P25445	232, 291	<i>H. sapiens</i>	14679192
P27169	208, 321, 352	<i>H. sapiens</i>	18682903
P35222	142, 306, 604	<i>H. sapiens</i>	17030184
P35354	261, 341, 446, 461	<i>H. sapiens</i>	9202025
P41240	64, 156	<i>H. sapiens</i>	10845713
P42224	5, 33, 170, 203, 289, 681	<i>H. sapiens</i>	16250053
P42330	110, 259, 317	<i>H. sapiens</i>	14684358
P42574	83, 274	<i>H. sapiens</i>	12516089
P49908	99, 166	<i>H. sapiens</i>	9792455
P56945	12, 128, 234, 837	<i>H. sapiens</i>	10401986
P60174	68, 165, 209	<i>H. sapiens</i>	12787059;19251756
P68366	83, 103, 108, 161, 224, 262, 282, 357, 440	<i>H. sapiens</i>	14684358
Q05940	503	<i>H. sapiens</i>	18599602
Q06323	249	<i>H. sapiens</i>	14684358
Q09472	620, 630, 1139, 1886, 2260	<i>H. sapiens</i>	1053046
Q13011	281	<i>H. sapiens</i>	14684358
Q8MGQ7	108	<i>H. sapiens</i>	18764882;19651177
Q92769	3, 46, 73, 189, 253, 359	<i>H. sapiens</i>	15013452
Q99426	64, 114, 133	<i>H. sapiens</i>	18048340
Q99571	315	<i>H. sapiens</i>	16793133
Q99798	71, 151	<i>H. sapiens</i>	14684358
A2AQ25	101, 244, 262, 714, 987, 1061, 1077, 1607, 1665	<i>M. musculus</i>	19150419
O08677	316, 405, 550	<i>M. musculus</i>	17615369
O08709	149, 220	<i>M. musculus</i>	16622028;19150419
O08749	8, 54, 473	<i>M. musculus</i>	19150419
O22769	63, 195	<i>M. musculus</i>	12821649
O35074	260, 431, 497	<i>M. musculus</i>	17065353
O35639	15, 60, 64, 132, 133, 183, 297	<i>M. musculus</i>	16622028
O35744	130	<i>M. musculus</i>	16622028

O35945	484	<i>M. musculus</i>	16622028
P01027	446, 455, 685, 1228, 1480, 1659	<i>M. musculus</i>	17615369
P01731	112	<i>M. musculus</i>	17603493
P01867	8, 61, 237, 292, 323	<i>M. musculus</i>	17615369
P01873	465	<i>M. musculus</i>	17615369
P06151	83, 239	<i>M. musculus</i>	16622028
P06909	42, 1013, 1230	<i>M. musculus</i>	17615369
P07309	136	<i>M. musculus</i>	17615369
P07356	147, 151, 188, 199, 316, 318, 333	<i>M. musculus</i>	16622028
P08074	149, 241	<i>M. musculus</i>	16622028
P08226	84	<i>M. musculus</i>	17615369
P09103	96, 459	<i>M. musculus</i>	16622028
P09542	82, 139, 194	<i>M. musculus</i>	19150419
P09671	58	<i>M. musculus</i>	12821649;16622028; 16651627;19129394
P10107	21, 28, 84, 156, 207, 240	<i>M. musculus</i>	16622028
P10300	80	<i>M. musculus</i>	17603493
P10639	80	<i>M. musculus</i>	17561092
P11103	9, 231, 617, 644, 709, 793, 816, 847	<i>M. musculus</i>	18829681
P15208	616, 829, 1028	<i>M. musculus</i>	19682478;20103705
P15626	7, 23, 28, 33, 79, 127, 138, 161	<i>M. musculus</i>	16622028
P17182	44, 131, 189, 200, 252, 257, 270, 287	<i>M. musculus</i>	15378736
P17563	28, 43	<i>M. musculus</i>	16622028
P20152	30, 38, 117, 276, 291, 319	<i>M. musculus</i>	10606512;19956584
P22599	205, 262, 315	<i>M. musculus</i>	17615369
P24529	200, 428, 432, 448	<i>M. musculus</i>	9636206
P26443	2, 464, 528, 539, 550	<i>M. musculus</i>	19150419
P27773	67, 222, 467	<i>M. musculus</i>	16622028
P28271	466, 666, 873, 882	<i>M. musculus</i>	15258160
P28867	12, 52, 469	<i>M. musculus</i>	16314418
P31750	18, 152, 263, 272	<i>M. musculus</i>	19682478;20103705
P32233	108, 313	<i>M. musculus</i>	16622028
P35569	147, 460, 489, 628, 795, 891, 903, 935, 995, 1006, 1173	<i>M. musculus</i>	19682478;20103705
P37238	102, 116, 123, 247, 250, 501	<i>M. musculus</i>	12163159
P40936	6, 21, 216	<i>M. musculus</i>	16622028
P42225	33, 170, 289, 681	<i>M. musculus</i>	11159690
P46638	8, 10, 99	<i>M. musculus</i>	19150419
P51881	195, 291	<i>M. musculus</i>	19272377
P62334	40, 132, 207, 386	<i>M. musculus</i>	19597039
P63085	137, 315	<i>M. musculus</i>	18523870
P70288	3, 46, 73, 189, 253, 359	<i>M. musculus</i>	19164702
P70313	80, 134, 162, 209, 330, 356, 372, 409, 523, 533, 555, 608, 656, 792, 899, 939, 961, 1086, 1154	<i>M. musculus</i>	11316578
P81122	621, 970, 1242, 1303	<i>M. musculus</i>	20103705
Q05769	341, 446, 461, 481	<i>M. musculus</i>	16375865
Q07100	252, 311	<i>M. musculus</i>	18791203
Q60932	186	<i>M. musculus</i>	12821649;19150419
Q61292	235, 1711, 1760, 1795	<i>M. musculus</i>	19956584
Q61646	165, 254	<i>M. musculus</i>	17615369
Q61838	542, 1019, 1229, 1388, 1472	<i>M. musculus</i>	17615369
Q62120	96, 1021	<i>M. musculus</i>	17510231;17510232

Q63844	157, 281, 335	<i>M. musculus</i>	18523870
Q6PF93	9, 11, 302, 322, 405, 795, 884	<i>M. musculus</i>	9826526
Q6YK32	204, 532	<i>M. musculus</i>	17615369
Q8CGI9	49, 460, 783	<i>M. musculus</i>	19150419
Q8K0E8	172, 312	<i>M. musculus</i>	17615369
Q8K4Z3	93	<i>M. musculus</i>	19150419
Q8R4K2	10	<i>M. musculus</i>	20304961
Q8VCM7	93, 121, 134, 139	<i>M. musculus</i>	17615369
Q91X72	140	<i>M. musculus</i>	17615369
Q91XX4	247, 418, 489, 504	<i>M. musculus</i>	19150419
Q91Y86	105, 266, 325	<i>M. musculus</i>	18523870
Q91ZJ5	153, 210	<i>M. musculus</i>	19150419
Q921I1	242, 257, 673	<i>M. musculus</i>	17615369
Q99JY0	332	<i>M. musculus</i>	12821649
Q99K47	198, 221, 523	<i>M. musculus</i>	17615369
Q99KQ4	471	<i>M. musculus</i>	19150419
Q99MN9	488	<i>M. musculus</i>	19150419
Q9CR16	252, 365	<i>M. musculus</i>	19272377
Q9CR68	127	<i>M. musculus</i>	19150419
Q9DCT2	211, 244	<i>M. musculus</i>	19150419
Q9EQ20	108, 393	<i>M. musculus</i>	16622028;19150419
Q9ER56	261	<i>M. musculus</i>	15378736
Q9JJV2	7, 79, 99	<i>M. musculus</i>	16622028
Q9JK42	19, 240, 404	<i>M. musculus</i>	16622028
Q9Z1E3	181, 289, 302	<i>M. musculus</i>	15464059
P00637	210, 245	<i>O. cuniculus</i>	2553704
P00949	12, 195, 517	<i>O. cuniculus</i>	41237
P46409	7, 23, 28, 33, 79, 138, 161	<i>O. cuniculus</i>	12620373
Q08862	9, 147	<i>O. cuniculus</i>	12620373
Q08863	74	<i>O. cuniculus</i>	12620373
Q2QN81	185, 412, 418	<i>O. sativa</i>	19717529
Q67TZ4	99	<i>O. sativa</i>	19717529
Q75L89	346, 361, 484	<i>O. sativa</i>	19717529
Q8W314	384, 593	<i>O. sativa</i>	19717529
P42272	9, 235	<i>P. mirabilis</i>	241412
P42273	9, 235	<i>P. mirabilis</i>	241412
P10933	13, 292, 345	<i>P. sativum</i>	19717529
Q9SC31	336, 350	<i>Populus</i>	19717529
P02879	13, 158, 218, 562	<i>R. communis</i>	7470048
P00799	179, 241	<i>R. miehei</i>	4433573
A7VJC2	41, 135, 174	<i>R. norvegicus</i>	11593016;19402213
B2RZD6	32, 63, 72	<i>R. norvegicus</i>	15345482
O08557	50, 209, 249	<i>R. norvegicus</i>	18072209
O09171	77, 89, 128, 289	<i>R. norvegicus</i>	11593016
O74200	57, 69, 201	<i>R. norvegicus</i>	11593016
O88989	210	<i>R. norvegicus</i>	17254026;18072209; 19402213
P00507	75, 96, 316, 420	<i>R. norvegicus</i>	11593016;19402213
P02600	124, 179	<i>R. norvegicus</i>	15345482
P02770	54, 60, 108, 172, 181, 185, 287, 343, 356, 365, 377, 435, 476, 521	<i>R. norvegicus</i>	18072209
P04182	126	<i>R. norvegicus</i>	18072209

P04636	56, 80, 161	<i>R. norvegicus</i>	15345482;17254026; 19402213
P04762	512	<i>R. norvegicus</i>	11593016;18072209
P04905	7, 23, 33, 79, 138, 161	<i>R. norvegicus</i>	11593016
P05504	221	<i>R. norvegicus</i>	11593016
P05982	76	<i>R. norvegicus</i>	11593016;15345482
P06686	9, 129, 539, 821, 1020	<i>R. norvegicus</i>	17254026
P07323	44, 57, 131, 189, 252, 257, 287	<i>R. norvegicus</i>	18803298
P07335	39, 82, 269	<i>R. norvegicus</i>	17254026
P07340	205	<i>R. norvegicus</i>	17254026
P07379	72, 557, 606	<i>R. norvegicus</i>	18072209
P07824	318	<i>R. norvegicus</i>	506610
P07895	58, 217	<i>R. norvegicus</i>	15327813;15345482; 19402213;16399855
P08427	102, 186, 241	<i>R. norvegicus</i>	12922978
P09057	317, 389	<i>R. norvegicus</i>	11253164
P09117	223, 244, 343	<i>R. norvegicus</i>	17254026
P09605	116, 159, 313	<i>R. norvegicus</i>	15345482
P09951	3, 21, 323	<i>R. norvegicus</i>	18803298
P10608	350	<i>R. norvegicus</i>	16043170
P10860	2, 464, 528, 539, 550	<i>R. norvegicus</i>	11593016;19402213
P10888	38, 44, 82	<i>R. norvegicus</i>	15345482
P11345	574	<i>R. norvegicus</i>	10801894
P11442	377, 883, 921, 1050, 1128, 1168, 1211, 1237, 1405, 1438, 1451, 1487	<i>R. norvegicus</i>	16157014;17254026
P11598	67, 222, 467	<i>R. norvegicus</i>	18072209;19402213
P11884	222, 460, 499	<i>R. norvegicus</i>	18072209
P12346	114, 242, 257, 666, 674	<i>R. norvegicus</i>	15345482
P12839	3, 64, 93, 260, 319, 802	<i>R. norvegicus</i>	17254026;19956584
P13596	286, 313, 388, 683	<i>R. norvegicus</i>	17254026
P14141	51	<i>R. norvegicus</i>	11593016
P14480	170, 310	<i>R. norvegicus</i>	15345482
P14604	264	<i>R. norvegicus</i>	15345482
P15651	95	<i>R. norvegicus</i>	11593016
P15999	246, 311, 337, 440	<i>R. norvegicus</i>	17254026
P16086	26, 72, 433, 539, 601, 644, 695, 918, 942, 976, 978, 1020, 1073, 1411, 1517, 1579, 2423,	<i>R. norvegicus</i>	18803298
P16617	76, 161, 196	<i>R. norvegicus</i>	17254026;19402213
P17764	253, 328	<i>R. norvegicus</i>	15345482
P18405	247	<i>R. norvegicus</i>	11593016
P18886	538	<i>R. norvegicus</i>	14641011
P19112	332	<i>R. norvegicus</i>	11593016
P19511	182	<i>R. norvegicus</i>	15345482;17254026
P19527	9, 18, 57, 139, 178, 240, 266, 369, 425	<i>R. norvegicus</i>	16157014;17254026; 19956584
P21708	157, 281, 335	<i>R. norvegicus</i>	11923223;16139272; 18787063
P22791	332, 373	<i>R. norvegicus</i>	11593016
P23457	216, 259	<i>R. norvegicus</i>	11593016
P23565	8, 15, 272, 354	<i>R. norvegicus</i>	17254026;19956584
P23693	113, 134	<i>R. norvegicus</i>	15345482
P24329	7, 188	<i>R. norvegicus</i>	11593016
P25113	92, 142	<i>R. norvegicus</i>	18803298

P26255	392	<i>R. norvegicus</i>	16043170
P27791	70	<i>R. norvegicus</i>	17254026
P28480	545	<i>R. norvegicus</i>	16157014
P31596	538	<i>R. norvegicus</i>	20167432
P32551	381	<i>R. norvegicus</i>	15345482
P35355	341, 446, 461	<i>R. norvegicus</i>	9820830
P35571	134, 218, 246, 501	<i>R. norvegicus</i>	19402213
P38918	45, 207	<i>R. norvegicus</i>	18072209
P45592	68, 117, 140	<i>R. norvegicus</i>	17254026
P47819	13, 81, 114, 322, 347	<i>R. norvegicus</i>	16157014
P48500	68, 165, 209	<i>R. norvegicus</i>	17254026
P48675	5, 154	<i>R. norvegicus</i>	15345482
P48679	45, 81, 259, 267	<i>R. norvegicus</i>	11593016
P49950	9	<i>R. norvegicus</i>	15345482
P50137	4, 137, 275, 481	<i>R. norvegicus</i>	11593016
P50398	5, 229, 333, 339, 349	<i>R. norvegicus</i>	18803298
P50554	280	<i>R. norvegicus</i>	11593016
P55260	165, 179	<i>R. norvegicus</i>	11593016
P59215	69, 95, 303, 354	<i>R. norvegicus</i>	17254026
P60203	207	<i>R. norvegicus</i>	17254026
P60711	53, 69, 91, 169, 188, 198, 218, 240, 294, 337, 362	<i>R. norvegicus</i>	16284212
P61765	145, 191, 501	<i>R. norvegicus</i>	12124443
P62630	29, 183, 254	<i>R. norvegicus</i>	19402213
P62804	52, 73, 89, 99	<i>R. norvegicus</i>	15345482
P63018	15, 41, 134, 149, 183, 371, 525, 545, 611	<i>R. norvegicus</i>	18072209
P63039	243, 503	<i>R. norvegicus</i>	19402213
P63245	52	<i>R. norvegicus</i>	11593016;19402213
P63259	53, 69, 91, 169, 188, 198, 218, 240, 294, 337, 362	<i>R. norvegicus</i>	18072209
P85834	246, 266, 357	<i>R. norvegicus</i>	15345482
P85973	10, 249	<i>R. norvegicus</i>	11593016
P97532	100, 108	<i>R. norvegicus</i>	11593016
Q01986	240	<i>R. norvegicus</i>	10801894
Q02253	108, 393	<i>R. norvegicus</i>	15345482
Q03336	14, 135, 259, 295	<i>R. norvegicus</i>	11593016
Q05030	288, 376, 750, 969	<i>R. norvegicus</i>	12682076
Q05962	174, 195, 291, 297	<i>R. norvegicus</i>	15345482
Q06647	35, 82, 193	<i>R. norvegicus</i>	15345482
Q07439	15, 41, 134, 149, 183, 371, 525, 545	<i>R. norvegicus</i>	18803298
Q07523	51, 277	<i>R. norvegicus</i>	18072209
Q3KRE8	36, 51, 106, 222, 425	<i>R. norvegicus</i>	11593016
Q4KLZ6	546	<i>R. norvegicus</i>	18072209
Q4PP99	111, 150	<i>R. norvegicus</i>	15345482
Q4QRB4	51, 106, 222, 425, 437	<i>R. norvegicus</i>	17254026
Q60587	90, 332	<i>R. norvegicus</i>	15345482
Q62969	431, 497	<i>R. norvegicus</i>	19118096
Q63632	17, 89, 186, 384	<i>R. norvegicus</i>	18849345
Q63704	32, 134, 284, 428, 589	<i>R. norvegicus</i>	14641011
Q63787	6, 12, 73, 150, 219, 408, 431, 463, 467, 508, 580, 716	<i>R. norvegicus</i>	15615788
Q64565	13, 34	<i>R. norvegicus</i>	11593016
Q66HF1	20, 209, 530, 596, 636	<i>R. norvegicus</i>	15345482

Q6AYE4	275	<i>R. norvegicus</i>	15345482;17254026
Q6P6R2	8, 54, 473	<i>R. norvegicus</i>	17254026;18072209
Q6PDU7	101	<i>R. norvegicus</i>	15345482
Q9ER34	71, 151, 306	<i>R. norvegicus</i>	11593016;15345482; 17254026;19402213
Q9JIR0	108, 1767	<i>R. norvegicus</i>	11923223
Q9QZ81	2, 394	<i>R. norvegicus</i>	15345482
Q9R1Z0	173	<i>R. norvegicus</i>	19402213
Q9Z1E1	121, 160, 223, 238, 292, 348	<i>R. norvegicus</i>	15934946
Q9Z1L0	790	<i>R. norvegicus</i>	15615788
Q9Z272	293, 392	<i>R. norvegicus</i>	12058042
Q9Z2L0	7	<i>R. norvegicus</i>	11593016;15345482; 17254026;19402213
P22629	120	<i>S. avidinii</i>	8954558
P00360	253, 312, 328	<i>S. cerevisiae</i>	10746743
P00560	75, 159, 194, 381	<i>S. cerevisiae</i>	1089655
P16622	82, 248	<i>S. cerevisiae</i>	19695224
P19414	67, 147, 302, 534	<i>S. cerevisiae</i>	19695224
P28241	157	<i>S. cerevisiae</i>	19695224
P38825	126, 447	<i>S. cerevisiae</i>	19695224
P40513	123, 209, 228, 254	<i>S. cerevisiae</i>	19695224
P47031	705, 709	<i>S. cerevisiae</i>	19695224
P53318	73, 399	<i>S. cerevisiae</i>	19695224
Q08968	623, 652	<i>S. cerevisiae</i>	19695224
P05314	385, 459	<i>S. oleracea</i>	19717529
O19067	5, 123	<i>S. scrofa</i>	11099820
P00346	56, 80, 161	<i>S. scrofa</i>	728442
P10173	10, 207, 226	<i>S. scrofa</i>	6830817
Q29558	73, 486, 508, 516, 531, 543	<i>S. scrofa</i>	7357008
Q64392	9, 64, 140, 551, 833, 1033	<i>S. scrofa</i>	14649731
Q8MHY0	118, 152	<i>S. scrofa</i>	20386496
Q08276	185, 200, 603	<i>S. tuberosum</i>	19717529
Q43848	617	<i>S. tuberosum</i>	19717529
Q2PEP7	45	<i>T. pratense</i>	19717529
P01555	17, 24	<i>V. cholerae</i>	88548
P01556	97	<i>V. cholerae</i>	88548
Q6F414	89, 169	<i>Z. elegans</i>	19717529
P30920		<i>B. circulans</i>	8484906
P00669		<i>B. taurus</i>	239931
P20488		<i>B. taurus</i>	10428070
P02789		<i>G. gallus</i>	7092815
O14791		<i>H. sapiens</i>	2986587;8443247
P00441		<i>H. sapiens</i>	11338199
P00918		<i>H. sapiens</i>	16378731
P02461		<i>H. sapiens</i>	19467351
P15121		<i>H. sapiens</i>	14684358
P50552		<i>H. sapiens</i>	18599602
Q02156		<i>H. sapiens</i>	17255340
P00920		<i>M. musculus</i>	16622028
P02088		<i>M. musculus</i>	16622028
P08228		<i>M. musculus</i>	16622028
P14602		<i>M. musculus</i>	19150419
P20108		<i>M. musculus</i>	12821649

P23953	<i>M. musculus</i>	17615369
P24270	<i>M. musculus</i>	16622028
P39039	<i>M. musculus</i>	17615369
P51906	<i>M. musculus</i>	18093171
Q497L8	<i>M. musculus</i>	19150419
Q61012	<i>M. musculus</i>	16622028
Q64466	<i>M. musculus</i>	16622028
Q9QWK4	<i>M. musculus</i>	17615369
P10830	<i>O. cuniculus</i>	11839754
Q84YQ2	<i>O. sativa</i>	19717529
Q9FW84	<i>O. sativa</i>	19717529
O35077	<i>R. norvegicus</i>	18072209
O70351	<i>R. norvegicus</i>	19402213
P10111	<i>R. norvegicus</i>	17254026
P13233	<i>R. norvegicus</i>	17254026
P13437	<i>R. norvegicus</i>	11593016
P18090	<i>R. norvegicus</i>	16043170
P23928	<i>R. norvegicus</i>	15345482;19956584
P27139	<i>R. norvegicus</i>	18072209
P31399	<i>R. norvegicus</i>	15345482
P35434	<i>R. norvegicus</i>	15345482
P51635	<i>R. norvegicus</i>	18072209
P60881	<i>R. norvegicus</i>	12124443;17254026
P81155	<i>R. norvegicus</i>	19402213
Q64294	<i>R. norvegicus</i>	12922978
Q68FU3	<i>R. norvegicus</i>	15345482
Q6AYR0	<i>R. norvegicus</i>	11593016
P01052	<i>S. tuberosum</i>	399612
P01075	<i>S. tuberosum</i>	399612

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**Supplementary Table S3** – The top 15 most enriched biological processes, molecular functions and cellular localizations of PTN substrates in humans, respectively. *a.* the number of proteins annotated; *b.* the proportion of proteins annotated; *c.* E-ratio, enrichment ratio, the nitration proportion divided by the proteomic proportion.

Description of GO term	Nitration		Proteome		E-ratio <sup>c</sup>	P-value
	Num. <sup>a</sup>	Per. <sup>b</sup>	Num.	Per.		
<b><i>The top 15 most enriched biological processes</i></b>						
Translational elongation (GO:0006414)	27	6.99%	93	0.51%	13.74	1.32E-23
RNA splicing (GO:0008380)	38	9.84%	268	1.47%	6.71	1.05E-20
mRNA processing (GO:0006397)	29	7.51%	247	1.35%	5.55	7.10E-14
Translation (GO:0006412)	26	6.74%	213	1.17%	5.78	5.81E-13
Protein folding (GO:0006457)	20	5.18%	153	0.84%	6.18	8.26E-11
Negative regulation of ubiquitin-protein ligase activity involved in mitotic cell cycle (GO:0051436)	13	3.37%	62	0.34%	9.92	4.48E-10
Anaphase-promoting complex-dependent proteasomal ubiquitin-dependent protein catabolic process (GO:0031145)	13	3.37%	64	0.35%	9.61	6.81E-10
Glycolysis (GO:0006096)	10	2.59%	42	0.23%	11.26	1.28E-08
Interspecies interaction between organisms (GO:0044419)	26	6.74%	356	1.95%	3.46	4.47E-08
Anti-apoptosis (GO:0006916)	18	4.66%	184	1.01%	4.63	7.53E-08
Positive regulation of ubiquitin-protein ligase activity involved in mitotic cell cycle (GO:0051437)	11	2.85%	65	0.36%	8.01	1.05E-07
Response to lipopolysaccharide (GO:0032496)	13	3.37%	109	0.60%	5.64	5.14E-07
Positive regulation of nitric oxide biosynthetic process (GO:0045429)	7	1.81%	25	0.14%	13.25	6.18E-07
Regulation of blood pressure (GO:0008217)	9	2.33%	49	0.27%	8.69	7.47E-07
Response to drug (GO:0042493)	19	4.92%	240	1.31%	3.75	9.00E-07
<b><i>The top 15 most enriched molecular functions</i></b>						
Protein binding (GO:0005515)	265	68.65%	6,500	35.59%	1.93	1.38E-40
RNA binding (GO:0003723)	63	16.32%	621	3.40%	4.80	1.32E-25
Nucleotide binding (GO:0000166)	103	26.68%	1,955	10.71%	2.49	5.30E-19
Structural constituent of ribosome (GO:0003735)	25	6.48%	161	0.88%	7.35	5.99E-15
Unfolded protein binding (GO:0051082)	20	5.18%	114	0.62%	8.30	3.04E-13
ATP binding (GO:0005524)	72	18.65%	1,494	8.18%	2.28	2.52E-11
Single-stranded DNA binding (GO:0003697)	12	3.11%	54	0.30%	10.51	1.03E-09
rRNA binding (GO:0019843)	7	1.81%	24	0.13%	13.80	4.53E-07
Identical protein binding (GO:0042802)	23	5.96%	344	1.88%	3.16	1.27E-06
Chaperone binding (GO:0051087)	7	1.81%	30	0.16%	11.04	2.39E-06
Enzyme binding (GO:0019899)	13	3.37%	125	0.68%	4.92	2.48E-06
ATPase activity (GO:0016887)	13	3.37%	133	0.73%	4.62	4.97E-06
Heme binding (GO:0020037)	12	3.11%	124	0.68%	4.58	1.27E-05
Eukaryotic cell surface binding (GO:0043499)	5	1.30%	16	0.09%	14.78	1.48E-05
Lyase activity (GO:0016829)	10	2.59%	101	0.55%	4.68	5.51E-05
<b><i>The top 15 most enriched cellular localizations</i></b>						
Cytosol (GO:0005829)	111	28.76%	1,280	7.01%	4.10	1.50E-39



Cytoplasm (GO:0005737)	193	50.00%	4,578	25.07%	1.99	1.67E-26
Ribosome (GO:0005840)	27	6.99%	189	1.03%	6.76	4.07E-15
Nucleolus (GO:0005730)	53	13.73%	736	4.03%	3.41	4.51E-15
Spliceosomal complex (GO:0005681)	20	5.18%	126	0.69%	7.51	2.13E-12
Ribonucleoprotein complex (GO:0030529)	18	4.66%	103	0.56%	8.27	5.09E-12
Cytosolic small ribosomal subunit (GO:0022627)	12	3.11%	38	0.21%	14.94	1.11E-11
Nucleoplasm (GO:0005654)	36	9.33%	471	2.58%	3.62	2.85E-11
Melanosome (GO:0042470)	16	4.15%	88	0.48%	8.60	4.22E-11
Cytosolic large ribosomal subunit (GO:0022625)	10	2.59%	36	0.20%	13.14	2.47E-09
Soluble fraction (GO:0005625)	25	6.48%	321	1.76%	3.68	2.32E-08
Heterogeneous nuclear ribonucleoprotein complex (GO:0030530)	7	1.81%	17	0.09%	19.48	2.89E-08
Extracellular space (GO:0005615)	40	10.36%	726	3.98%	2.61	3.27E-08
Proteasome complex (GO:0000502)	10	2.59%	56	0.31%	8.45	2.37E-07
Nucleus (GO:0005634)	150	38.86%	5,053	27.67%	1.40	9.83E-07

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**Supplementary Table S4** – The top 15 most enriched biological processes, molecular functions and cellular localizations of S-nitrosylation substrates in humans, respectively. *a.* the number of proteins annotated; *b.* the proportion of proteins annotated; *c.* E-ratio, enrichment ratio, the S-nitrosylation proportion by the proteomic proportion.

Description of GO term	S-nitrosylation		Proteome		E-ratio <sup>c</sup>	P-value
	Num. <sup>a</sup>	Per. <sup>b</sup>	Num.	Per.		
<b><i>The top 15 most enriched biological processes</i></b>						
Glycolysis (GO:0006096)	24	6.06%	42	0.23%	26.35	1.44E-29
Cellular carbohydrate metabolic process (GO:0044262)	8	2.02%	10	0.05%	36.89	1.98E-12
Proteolysis involved in cellular protein catabolic process (GO:0051603)	9	2.27%	24	0.13%	17.29	9.49E-10
Protein polymerization (GO:0051258)	9	2.27%	30	0.16%	13.83	9.26E-09
Cellular component movement (GO:0006928)	14	3.54%	101	0.55%	6.39	3.74E-08
Tricarboxylic acid cycle (GO:0006099)	7	1.77%	22	0.12%	14.67	2.75E-07
Response to drug (GO:0042493)	20	5.05%	240	1.31%	3.84	3.06E-07
Anti-apoptosis (GO:0006916)	17	4.29%	184	1.01%	4.26	5.64E-07
Fructose 1,6-bisphosphate metabolic process (GO:0030388)	4	1.01%	5	0.03%	36.89	1.07E-06
Oxidation reduction (GO:0055114)	31	7.83%	547	3.00%	2.61	1.18E-06
Protein folding (GO:0006457)	15	3.79%	153	0.84%	4.52	1.24E-06
Response to unfolded protein (GO:0006986)	9	2.27%	52	0.28%	7.98	1.56E-06
Oxaloacetate metabolic process (GO:0006107)	5	1.26%	11	0.06%	20.96	1.94E-06
Microtubule-based movement (GO:0007018)	11	2.78%	89	0.49%	5.70	3.48E-06
Translational elongation (GO:0006414)	11	2.78%	93	0.51%	5.45	5.38E-06
<b><i>The top 15 most enriched molecular functions</i></b>						
Protein binding (GO:0005515)	248	62.63%	6,500	35.59%	1.76	2.02E-28
Nucleotide binding (GO:0000166)	101	25.51%	1,955	10.71%	2.38	3.50E-17
ATP binding (GO:0005524)	83	20.96%	1,494	8.18%	2.56	8.12E-16
Unfolded protein binding (GO:0051082)	20	5.05%	114	0.62%	8.09	4.89E-13
Structural constituent of cytoskeleton (GO:0005200)	15	3.79%	74	0.41%	9.35	4.82E-11
NAD or NADH binding (GO:0051287)	11	2.78%	38	0.21%	13.35	3.09E-10
L-lactate dehydrogenase activity (GO:0004459)	5	1.26%	5	0.03%	46.12	4.68E-09
Threonine-type endopeptidase activity (GO:0004298)	8	2.02%	21	0.12%	17.57	7.24E-09
Lyase activity (GO:0016829)	14	3.54%	101	0.55%	6.39	3.74E-08
Identical protein binding (GO:0042802)	26	6.57%	344	1.88%	3.49	3.74E-08
GTPase activity (GO:0003924)	20	5.05%	215	1.18%	4.29	5.05E-08
Oxidoreductase activity (GO:0016491)	28	7.07%	447	2.45%	2.89	5.59E-07
Nitric-oxide synthase regulator activity (GO:0030235)	4	1.01%	6	0.03%	30.74	3.16E-06
GTP binding (GO:0005525)	24	6.06%	382	2.09%	2.90	3.46E-06
Structural molecule activity (GO:0005198)	18	4.55%	241	1.32%	3.44	5.68E-06
<b><i>The top 15 most enriched cellular localizations</i></b>						
Cytoplasm (GO:0005737)	208	52.53%	4,578	25.07%	2.10	2.72E-32
Cytosol (GO:0005829)	102	25.76%	1,280	7.01%	3.67	6.65E-32
Mitochondrion (GO:0005739)	73	18.43%	1,254	6.87%	2.68	5.98E-15

Melanosome (GO:0042470)	19	4.80%	88	0.48%	9.96	3.60E-14
Cytoskeleton (GO:0005856)	43	10.86%	652	3.57%	3.04	8.78E-11
Mitochondrial matrix (GO:0005759)	20	5.05%	150	0.82%	6.15	9.04E-11
Soluble fraction (GO:0005625)	27	6.82%	321	1.76%	3.88	2.07E-09
Z disc (GO:0030018)	10	2.53%	47	0.26%	9.81	5.20E-08
Protein complex (GO:0043234)	17	4.29%	158	0.87%	4.96	6.21E-08
Mitochondrial outer membrane (GO:0005741)	12	3.03%	82	0.45%	6.75	1.93E-07
Proteasome core complex, alpha-subunit complex (GO:0019773)	5	1.26%	8	0.04%	28.82	2.48E-07
Actin cytoskeleton (GO:0015629)	15	3.79%	137	0.75%	5.05	2.96E-07
Microtubule cytoskeleton (GO:0015630)	9	2.27%	54	0.30%	7.69	2.17E-06
Mitochondrial inner membrane (GO:0005743)	19	4.80%	255	1.40%	3.44	3.24E-06
Perinuclear region of cytoplasm (GO:0048471)	21	5.30%	321	1.76%	3.02	7.67E-06

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