

SUPPLEMENTAL FIGURE LEGENDS

Supplemental Figure 1: Glycolytic enzyme molecules are not externalized on autophagic or necrotic cells. HeLa cells that were induced to undergo autophagy by serum starvation with L-canavanine (1 mM) in the presence of the pan-caspase inhibitor Q-VD-OPh (10 μ M), apoptotic HeLa cells (induced by serum starvation in the absence of Q-VD-OPh), and viable HeLa cells were analyzed cytofluorimetrically following staining for **(A)** α -Enolase (with polyclonal Rabbit anti- α -Enolase peptide IgG and secondary FITC-conjugated Goat anti-Rabbit IgG [Abcam]), **(B)** GAPDH (with polyclonal Rabbit anti-GAPDH IgG and secondary FITC-conjugated Goat anti-Rabbit IgG [Abcam]), and **(C)** Triosephosphate Isomerase (with polyclonal Rabbit anti-Triosephosphate Isomerase peptide IgG and secondary FITC-conjugated Goat anti-Rabbit IgG [Abcam]). Profiles shown **(A-C)** are for autophagic (orange, solid lines), apoptotic (solid green histograms), and viable (black, dashed lines) cells stained with the specific FITC-conjugated reagents. Cells that had lost membrane integrity (PI^+ , low forward- and side-angle light scatter) were excluded from these analyses by electronic gating. Cells triggered to die necrotically also were analyzed, as in Figure 8, following staining with PE-conjugated annexin V, 7-AAD, and reagents specific (as above) for **(D)** α -Enolase, **(E)** GAPDH, and **(F)** Triosephosphate Isomerase. Cells that met the criteria of staining positively with annexin V and negatively with 7-AAD (annexin V^+ 7-AAD $^-$) were gated electronically, and the fluorescein signal of those cells was analyzed (shown as solid violet histograms in panels **D-F**). The fluorescein signal of annexin V^+ 7-AAD $^-$ cells stained with secondary antibody alone also is presented (gray, dotted lines in panels **D-F**).

Supplemental Figure 2: Apoptotic externalization of glycolytic enzyme molecules is caspase-dependent. HeLa cells, subjected to irradiation with UV-C light in the presence of the pan-caspase inhibitor Q-VD-OPh (10 μ M, including 90 min. pre-treatment) and in its absence, were analyzed cytofluorimetrically following staining, as in Supplementary Figure 1, for **(A)** α -Enolase, **(B)** GAPDH, and **(C)** Triosephosphate Isomerase. Profiles shown are for cells irradiated in the presence of Q-VD-OPh (blue, solid lines) and in its absence (solid green histograms). The fluorescein signal of cells stained with secondary antibody alone also is presented (gray, dotted lines). Cells that had lost membrane integrity (PI^+ , low forward- and side-angle light scatter) were excluded from these analyses by electronic gating.

SUPPLEMENTAL TABLE

Supplemental Table I: Relative abundance of all apoptotic membrane-associated proteins identified by iTRAQ analysis.

	Identified Proteins	Accession ID	Ratio	T-test
1	10 kDa heat shock protein, mitochondrial	CH10_HUMAN	1.15	0.11
2	116 kDa U5 small nuclear ribonucleoprotein component	U5S1_HUMAN	1.00	1.00
3	14-3-3 protein beta/alpha	1433B_HUMAN	1.57	0.02
4	14-3-3 protein epsilon	1433E_HUMAN	1.36	0.05
5	14-3-3 protein gamma	1433G_HUMAN	0.97	0.91
6	14-3-3 protein theta	1433T_HUMAN	1.28	0.39
7	14-3-3 protein zeta/delta	1433Z_HUMAN	1.22	0.25
8	26S protease regulatory subunit 4	PRS4_HUMAN	0.84	0.04
9	26S protease regulatory subunit 6A	PRS6A_HUMAN	0.90	0.50
10	26S protease regulatory subunit 6B	PRS6B_HUMAN	0.85	0.22
11	26S protease regulatory subunit 7	PRS7_HUMAN	1.03	0.82
12	26S proteasome non-ATPase regulatory subunit 11	PSD11_HUMAN	0.96	0.79
13	26S proteasome non-ATPase regulatory subunit 13	PSD13_HUMAN	0.55	0.16
14	26S proteasome non-ATPase regulatory subunit 2	PSMD2_HUMAN	0.91	0.82
15	26S proteasome non-ATPase regulatory subunit 5	PSMD5_HUMAN	0.58	0.10
16	26S proteasome non-ATPase regulatory subunit 6	PSMD6_HUMAN	0.81	0.40
17	26S proteasome non-ATPase regulatory subunit 8	PSMD8_HUMAN	0.55	0.12
18	28S ribosomal protein S23, mitochondrial	RT23_HUMAN	0.79	0.59
19	2-oxoglutarate dehydrogenase, mitochondrial	ODO1_HUMAN	0.67	0.17
20	39S ribosomal protein L12, mitochondrial	RM12_HUMAN	0.99	0.95
21	40S ribosomal protein S10	RS10_HUMAN	0.76	0.03
22	40S ribosomal protein S11	RS11_HUMAN	0.93	0.29
23	40S ribosomal protein S12	RS12_HUMAN	0.78	0.10
24	40S ribosomal protein S13	RS13_HUMAN	0.75	0.15
25	40S ribosomal protein S14	RS14_HUMAN	0.84	0.26
26	40S ribosomal protein S15	RS15_HUMAN	0.87	0.29
27	40S ribosomal protein S15a	RS15A_HUMAN	0.68	0.01
28	40S ribosomal protein S16	RS16_HUMAN	0.68	0.05
29	40S ribosomal protein S17	RS17_HUMAN	0.52	0.00
30	40S ribosomal protein S18	RS18_HUMAN	0.66	0.04
31	40S ribosomal protein S19	RS19_HUMAN	0.78	0.02
32	40S ribosomal protein S2	RS2_HUMAN	0.57	0.03
33	40S ribosomal protein S20	RS20_HUMAN	0.88	0.47
34	40S ribosomal protein S23	RS23_HUMAN	0.57	0.01
35	40S ribosomal protein S24	RS24_HUMAN	0.81	0.11
36	40S ribosomal protein S25	RS25_HUMAN	0.84	0.17
37	40S ribosomal protein S26	RS26_HUMAN	0.94	0.61
38	40S ribosomal protein S27	RS27_HUMAN	1.07	0.29
39	40S ribosomal protein S3	RS3_HUMAN	0.87	0.20
40	40S ribosomal protein S3a	RS3A_HUMAN	0.68	0.05
41	40S ribosomal protein S4, X isoform	RS4X_HUMAN	0.81	0.05
42	40S ribosomal protein S5	RS5_HUMAN	0.67	0.11
43	40S ribosomal protein S6	RS6_HUMAN	0.78	0.10
44	40S ribosomal protein S7	RS7_HUMAN	1.07	0.55

45	40S ribosomal protein S8	RS8_HUMAN	0.84	0.03
46	40S ribosomal protein S9	RS9_HUMAN	0.68	0.01
47	40S ribosomal protein SA	RSSA_HUMAN	0.84	0.15
48	4F2 cell-surface antigen heavy chain	4F2_HUMAN	0.90	0.32
49	60 kDa heat shock protein, mitochondrial	CH60_HUMAN	1.14	0.33
50	60S acidic ribosomal protein P0	RLA0_HUMAN	0.84	0.04
51	60S acidic ribosomal protein P1	RLA1_HUMAN	0.96	0.69
52	60S acidic ribosomal protein P2	RLA2_HUMAN	0.97	0.42
53	60S ribosomal protein L10	RL10_HUMAN	0.78	0.02
54	60S ribosomal protein L10a	RL10A_HUMAN	0.73	0.14
55	60S ribosomal protein L11	RL11_HUMAN	0.94	0.61
56	60S ribosomal protein L12	RL12_HUMAN	0.81	0.08
57	60S ribosomal protein L13	RL13_HUMAN	0.71	0.02
58	60S ribosomal protein L13a	RL13A_HUMAN	0.81	0.05
59	60S ribosomal protein L14	RL14_HUMAN	0.62	0.04
60	60S ribosomal protein L15	RL15_HUMAN	0.71	0.03
61	60S ribosomal protein L17	RL17_HUMAN	0.84	0.15
62	60S ribosomal protein L18	RL18_HUMAN	0.71	0.02
63	60S ribosomal protein L18a	RL18A_HUMAN	0.81	0.05
64	60S ribosomal protein L19	RL19_HUMAN	0.45	0.03
65	60S ribosomal protein L21	RL21_HUMAN	0.78	0.02
66	60S ribosomal protein L23	RL23_HUMAN	0.71	0.05
67	60S ribosomal protein L23a	RL23A_HUMAN	0.81	0.05
68	60S ribosomal protein L24	RL24_HUMAN	0.50	0.02
69	60S ribosomal protein L26	RL26_HUMAN	0.66	0.00
70	60S ribosomal protein L27	RL27_HUMAN	0.65	0.09
71	60S ribosomal protein L27a	RL27A_HUMAN	1.03	0.71
72	60S ribosomal protein L28	RL28_HUMAN	0.87	0.11
73	60S ribosomal protein L3	RL3_HUMAN	0.73	0.05
74	60S ribosomal protein L30	RL30_HUMAN	0.93	0.29
75	60S ribosomal protein L31	RL31_HUMAN	0.87	0.29
76	60S ribosomal protein L32	RL32_HUMAN	0.58	0.01
77	60S ribosomal protein L34	RL34_HUMAN	0.56	0.04
78	60S ribosomal protein L35	RL35_HUMAN	0.73	0.01
79	60S ribosomal protein L35a	RL35A_HUMAN	0.84	0.03
80	60S ribosomal protein L36a	RL36A_HUMAN	0.59	0.00
81	60S ribosomal protein L37	RL37_HUMAN	0.81	0.11
82	60S ribosomal protein L37a	RL37A_HUMAN	0.84	0.15
83	60S ribosomal protein L4	RL4_HUMAN	0.78	0.02
84	60S ribosomal protein L5	RL5_HUMAN	0.73	0.07
85	60S ribosomal protein L6	RL6_HUMAN	0.73	0.02
86	60S ribosomal protein L7	RL7_HUMAN	0.84	0.03
87	60S ribosomal protein L7a	RL7A_HUMAN	0.78	0.02
88	60S ribosomal protein L9	RL9_HUMAN	0.60	0.02
89	6-phosphofructokinase type C	K6PP_HUMAN	0.81	0.08
90	6-phosphogluconate dehydrogenase, decarboxylating	6PGD_HUMAN	1.23	0.29
91	78 kDa glucose-regulated protein	GRP78_HUMAN	0.89	0.53
92	Acidic leucine-rich nuclear phosphoprotein 32 family member A	AN32A_HUMAN	1.19	0.03
93	Actin-related protein 2	ARP2_HUMAN	0.84	0.04
94	Actin-related protein 2/3 complex subunit 2	ARPC2_HUMAN	1.27	0.02

95	Actin-related protein 2/3 complex subunit 3	ARPC3_HUMAN	1.37	0.01
96	Actin-related protein 2/3 complex subunit 4	ARPC4_HUMAN	1.12	0.42
97	Actin-related protein 3	ARP3_HUMAN	1.19	0.31
98	Activated RNA polymerase II transcriptional coactivator p15	TCP4_HUMAN	0.87	0.20
99	Acyl-CoA-binding protein	ACBP_HUMAN	1.94	0.05
100	Adenosylhomocysteinase	SAHH_HUMAN	1.10	0.56
101	Adenylyl cyclase-associated protein 1	CAP1_HUMAN	1.23	0.18
102	ADP/ATP translocase 2	ADT2_HUMAN	0.73	0.05
103	ADP-ribosylation factor 1	ARF1_HUMAN	1.03	0.42
104	ADP-ribosylation factor 4	ARF4_HUMAN	0.87	0.29
105	ADP-ribosylation factor 6	ARF6_HUMAN	0.86	0.75
106	Alanyl-tRNA synthetase, cytoplasmic	SYAC_HUMAN	1.19	0.17
107	Aldose reductase	ALDR_HUMAN	1.68	0.02
108	Alkaline phosphatase, tissue-nonspecific isozyme	PPBT_HUMAN	0.42	0.03
109	Alpha-actinin-1	ACTN1_HUMAN	1.46	0.01
110	Alpha-actinin-4	ACTN4_HUMAN	1.18	0.22
111	Alpha-centractin	ACTZ_HUMAN	1.55	0.22
112	Alpha-enolase	ENOA_HUMAN	1.46	0.03
113	Annexin A1	ANXA1_HUMAN	0.66	0.04
114	Annexin A11	ANX11_HUMAN	1.17	0.42
115	Annexin A2	ANXA2_HUMAN	0.57	0.03
116	Annexin A3	ANXA3_HUMAN	1.16	0.51
117	Annexin A5	ANXA5_HUMAN	0.45	0.02
118	Annexin A6	ANXA6_HUMAN	0.47	0.02
119	AP-2 complex subunit beta	AP2B1_HUMAN	0.87	0.29
120	Arginyl-tRNA synthetase, cytoplasmic	SYRC_HUMAN	0.71	0.07
121	Asparagine synthetase [glutamine-hydrolyzing]	ASNS_HUMAN	0.42	0.02
122	Asparaginyl-tRNA synthetase, cytoplasmic	SYNC_HUMAN	0.90	0.32
123	Aspartate aminotransferase, mitochondrial	AATM_HUMAN	1.03	0.71
124	Aspartyl/asparaginyl beta-hydroxylase	ASPH_HUMAN	0.84	0.17
125	Aspartyl-tRNA synthetase, cytoplasmic	SYDC_HUMAN	0.68	0.01
126	ATP synthase subunit alpha, mitochondrial	ATPA_HUMAN	0.86	0.42
127	ATP synthase subunit b, mitochondrial	AT5F1_HUMAN	1.14	0.58
128	ATP synthase subunit beta, mitochondrial	ATPB_HUMAN	0.87	0.34
129	ATP synthase subunit d, mitochondrial	ATP5H_HUMAN	1.46	0.01
130	ATP synthase subunit gamma, mitochondrial	ATPG_HUMAN	0.84	0.26
131	ATPase inhibitor, mitochondrial	ATIF1_HUMAN	1.28	0.47
132	ATP-citrate synthase	ACLY_HUMAN	0.90	0.10
133	ATP-dependent DNA helicase Q1	RECQ1_HUMAN	0.57	0.14
134	ATP-dependent RNA helicase A	DHX9_HUMAN	0.84	0.04
135	ATP-dependent RNA helicase DDX39	DDX39_HUMAN	0.89	0.53
136	ATP-dependent RNA helicase DDX3X	DDX3X_HUMAN	0.93	0.29
137	Barrier-to-autointegration factor	BAF_HUMAN	0.73	0.07
138	Basic leucine zipper and W2 domain-containing protein 1	BZW1_HUMAN	0.97	0.42
139	Basigin	BASI_HUMAN	1.04	0.79
140	B-cell receptor-associated protein 31	BAP31_HUMAN	0.86	0.50
141	Bifunctional aminoacyl-tRNA synthetase	SYEP_HUMAN	0.90	0.31
142	Brain acid soluble protein 1	BASP1_HUMAN	0.87	0.34
143	BTB/POZ domain-containing protein KCTD12	KCD12_HUMAN	1.50	0.07
144	C-1-tetrahydrofolate synthase, cytoplasmic	C1TC_HUMAN	0.76	0.20

145	CAD protein	PYR1_HUMAN	0.98	0.94
146	Calmodulin	CALM_HUMAN	1.25	0.58
147	Calnexin	CALX_HUMAN	0.93	0.55
148	Calpastatin	ICAL_HUMAN	1.68	0.03
149	Calreticulin	CALR_HUMAN	0.75	0.21
150	Calumenin	CALU_HUMAN	0.73	0.01
151	Caprin-1	CAPR1_HUMAN	1.15	0.29
152	Carbamoyl-phosphate synthase [ammonia], mitochondrial	CPSM_HUMAN	0.81	0.22
153	Carbonyl reductase [NADPH] 1	CBR1_HUMAN	1.37	0.07
154	Casein kinase II subunit alpha	CSK21_HUMAN	0.90	0.09
155	Cation-dependent mannose-6-phosphate receptor	MPRD_HUMAN	0.96	0.74
156	Cation-independent mannose-6-phosphate receptor	MPRI_HUMAN	0.63	0.20
157	CD44 antigen	CD44_HUMAN	1.11	0.31
158	CD59 glycoprotein	CD59_HUMAN	0.48	0.09
159	CD9 antigen	CD9_HUMAN	0.93	0.68
160	Cell division protein kinase 1	CDK1_HUMAN	1.15	0.34
161	Cell surface glycoprotein MUC18	MUC18_HUMAN	0.81	0.32
162	Chloride intracellular channel protein 1	CLIC1_HUMAN	0.99	0.97
163	Chromobox protein homolog 3	CBX3_HUMAN	1.07	0.42
164	Citrate synthase, mitochondrial	CISY_HUMAN	0.93	0.29
165	Clathrin heavy chain 1	CLH1_HUMAN	0.75	0.15
166	Clathrin light chain A	CLCA_HUMAN	0.68	0.05
167	Clathrin light chain B	CLCB_HUMAN	0.76	0.11
168	Coatomer subunit alpha	COPA_HUMAN	1.03	0.87
169	Coatomer subunit beta	COPB_HUMAN	0.97	0.80
170	Cofilin-1	COF1_HUMAN	1.32	0.03
171	Cold shock domain-containing protein E1	CSDE1_HUMAN	1.07	0.42
172	Complement C1Q subcomponent-binding protein, mitochondrial	C1QBP_HUMAN	1.23	0.17
173	Complement decay-accelerating factor	DAF_HUMAN	0.68	0.11
174	Condensin complex subunit 1	CND1_HUMAN	0.73	0.47
175	Core histone macro-H2A.1	H2AY_HUMAN	1.00	0.42
176	Creatine kinase B-type	KCRB_HUMAN	1.37	0.37
177	Cyclin-dependent kinase inhibitor 2A, isoforms 1/2/3	CD2A1_HUMAN	1.42	0.11
178	Cystatin-B	CYTB_HUMAN	1.54	0.18
179	Cytochrome b5	CYB5_HUMAN	0.84	0.04
180	Cytochrome b-c1 complex subunit 7	QCR7_HUMAN	0.50	0.02
181	Cytochrome c	CYC_HUMAN	2.71	0.01
182	Cytoplasmic dynein 1 heavy chain 1	DYHC1_HUMAN	0.69	0.09
183	Cytosolic phospholipase A2	PA24A_HUMAN	1.46	0.01
184	D-3-phosphoglycerate dehydrogenase	SERA_HUMAN	0.97	0.71
185	D-dopachrome decarboxylase	DOPD_HUMAN	1.35	0.14
186	Delta(3,5)-Delta(2,4)-dienoyl-CoA isomerase, mitochondrial	ECH1_HUMAN	0.66	0.01
187	Deoxyuridine 5'-triphosphate nucleotidohydrolase, mitochondrial	DUT_HUMAN	1.07	0.29
188	Destrin	DEST_HUMAN	1.11	0.31
189	Dihydrolipoyl dehydrogenase, mitochondrial	DLDH_HUMAN	0.90	0.31
190	Dihydropyrimidinase-related protein 2	DPYL2_HUMAN	0.96	0.87
191	Dipeptidyl peptidase 1	CATC_HUMAN	0.31	0.02
192	DNA damage-binding protein 1	DDB1_HUMAN	0.88	0.63
193	DNA replication licensing factor MCM2	MCM2_HUMAN	1.07	0.29
194	DNA replication licensing factor MCM4	MCM4_HUMAN	0.64	0.02

195	DNA replication licensing factor MCM5	MCM5_HUMAN	0.60	0.02
196	DNA replication licensing factor MCM6	MCM6_HUMAN	1.07	0.29
197	DNA replication licensing factor MCM7	MCM7_HUMAN	0.67	0.16
198	DNA topoisomerase 1	TOP1_HUMAN	0.96	0.69
199	DNA topoisomerase 2-alpha	TOP2A_HUMAN	0.73	0.01
200	DNA-dependent protein kinase catalytic subunit	PRKDC_HUMAN	0.76	0.03
201	DnaJ homolog subfamily A member 1	DNJA1_HUMAN	1.28	0.20
202	Dolichyl-diphosphooligosac.-protein glycosyltransferase 48 kDa sub.	OST48_HUMAN	0.98	0.92
203	Dolichyl-diphosphooligosac.-protein glycosyltransferase subunit 1	RPN1_HUMAN	0.99	0.95
204	Dolichyl-diphosphooligosac.-protein glycosyltransferase subunit 2	RPN2_HUMAN	0.72	0.16
205	Dolichyl-diphosphooligosac.-protein glycosyltransferase sub. STT3B	STT3B_HUMAN	0.79	0.39
206	EGF-like repeat and discoïdin I-like domain-containing protein 3	EDIL3_HUMAN	0.68	0.05
207	Elongation factor 1-alpha 1	EF1A1_HUMAN	1.00	0.42
208	Elongation factor 1-beta	EF1B_HUMAN	1.11	0.10
209	Elongation factor 1-delta	EF1D_HUMAN	1.00	1.00
210	Elongation factor 1-gamma	EF1G_HUMAN	1.19	0.04
211	Elongation factor 2	EF2_HUMAN	1.19	0.03
212	Elongation factor Tu, mitochondrial	EFTU_HUMAN	0.90	0.32
213	Emerin	EMD_HUMAN	0.88	0.53
234	Endoplasmic reticulum resident protein 29	ERP29_HUMAN	0.78	0.20
215	Endoplasmin	ENPL_HUMAN	0.84	0.17
216	Endothelin-converting enzyme 1	ECE1_HUMAN	0.62	0.04
217	Enhancer of rudimentary homolog	ERH_HUMAN	0.94	0.82
218	Equilibrative nucleoside transporter 1	S29A1_HUMAN	0.92	0.69
219	Erythrocyte band 7 integral membrane protein	STOM_HUMAN	1.07	0.55
220	Eukaryotic initiation factor 4A-I	IF4A1_HUMAN	0.97	0.42
221	Eukaryotic initiation factor 4A-III	IF4A3_HUMAN	0.97	0.71
222	Eukaryotic peptide chain release factor GTP-binding subunit ERF3A	ERF3A_HUMAN	1.27	0.02
223	Eukaryotic translation elongation factor 1 epsilon-1	MCA3_HUMAN	1.37	0.26
224	Eukaryotic translation initiation factor 1A, X-chromosomal	IF1AX_HUMAN	1.18	0.34
225	Eukaryotic translation initiation factor 2 subunit 1	IF2A_HUMAN	1.16	0.51
226	Eukaryotic translation initiation factor 2 subunit 2-like protein	IF2BL_HUMAN	0.87	0.29
227	Eukaryotic translation initiation factor 2 subunit 3	IF2G_HUMAN	0.73	0.12
228	Eukaryotic translation initiation factor 3 subunit A	EIF3A_HUMAN	1.19	0.17
229	Eukaryotic translation initiation factor 3 subunit B	EIF3B_HUMAN	0.87	0.34
230	Eukaryotic translation initiation factor 3 subunit C	EIF3C_HUMAN	0.95	0.80
231	Eukaryotic translation initiation factor 3 subunit I	EIF3I_HUMAN	0.93	0.55
232	Eukaryotic translation initiation factor 3 subunit L	EIF3L_HUMAN	1.04	0.42
233	Eukaryotic translation initiation factor 4 gamma 1	IF4G1_HUMAN	0.96	0.74
234	Eukaryotic translation initiation factor 5A-1	IF5A1_HUMAN	1.11	0.31
235	Exportin-1	XPO1_HUMAN	1.19	0.30
236	Exportin-2	XPO2_HUMAN	1.55	0.09
237	Ezrin	EZRI_HUMAN	1.32	0.03
238	FACT complex subunit SSRP1	SSRP1_HUMAN	0.57	0.13
239	F-actin-capping protein subunit beta	CAPZB_HUMAN	0.81	0.11
240	Far upstream element-binding protein 1	FUBP1_HUMAN	0.96	0.79
241	Farnesyl pyrophosphate synthase	FPPS_HUMAN	1.11	0.49
242	Fascin	FSCN1_HUMAN	1.47	0.09
243	Fatty acid synthase	FAS_HUMAN	1.23	0.00
244	Fatty aldehyde dehydrogenase	AL3A2_HUMAN	0.72	0.33

245	Filamin-A	FLNA_HUMAN	0.84	0.04
246	Filamin-B	FLNB_HUMAN	1.23	0.08
247	Flap endonuclease 1	FEN1_HUMAN	0.93	0.55
248	Fructose-bisphosphate aldolase A	ALDOA_HUMAN	1.46	0.03
249	Fumarate hydratase, mitochondrial	FUMH_HUMAN	1.37	0.07
250	Galectin-1	LEG1_HUMAN	1.17	0.42
251	Gelsolin	GELS_HUMAN	0.59	0.07
252	General transcription factor II-I	GTF2I_HUMAN	0.91	0.56
253	Glucose-6-phosphate 1-dehydrogenase	G6PD_HUMAN	0.90	0.42
254	Glucose-6-phosphate isomerase	G6PI_HUMAN	1.36	0.12
255	Glucosidase 2 subunit beta	GLU2B_HUMAN	0.76	0.07
256	Glutaminyl-tRNA synthetase	SYQ_HUMAN	1.15	0.11
257	Glutathione S-transferase Mu 3	GSTM3_HUMAN	0.81	0.32
258	Glutathione S-transferase omega-1	GSTO1_HUMAN	1.68	0.00
259	Glutathione S-transferase P	GSTP1_HUMAN	1.51	0.02
260	Glyceraldehyde-3-phosphate dehydrogenase	G3P_HUMAN	1.10	0.42
261	Glycyl-tRNA synthetase	SYG_HUMAN	0.97	0.80
262	GTP-binding nuclear protein Ran	RAN_HUMAN	1.11	0.10
263	Guanine nucleotide-binding protein G(i) subunit alpha-2	GNAI2_HUMAN	0.72	0.25
264	Guanine nucleotide-binding protein G(I)/G(S)/G(T) subunit beta-1	GBB1_HUMAN	0.68	0.05
265	Guanine nucleotide-binding protein G(s) α isoforms XLas	GNAS1_HUMAN	0.96	0.89
266	Guanine nucleotide-binding protein subunit beta-2-like 1	GBLP_HUMAN	0.73	0.07
267	Heat shock 70 kDa protein 1A/1B	HSP71_HUMAN	1.15	0.11
268	Heat shock 70 kDa protein 4	HSP74_HUMAN	1.41	0.07
269	Heat shock cognate 71 kDa protein	HSP7C_HUMAN	1.37	0.01
270	Heat shock protein 75 kDa, mitochondrial	TRAP1_HUMAN	0.96	0.69
271	Heat shock protein beta-1	HSPB1_HUMAN	0.57	0.00
272	Heat shock protein HSP 90-alpha	HS90A_HUMAN	1.68	0.05
273	Heat shock protein HSP 90-beta	HS90B_HUMAN	1.36	0.05
274	Hepatoma-derived growth factor	HDGF_HUMAN	1.32	0.20
275	Heterogeneous nuclear ribonucleoprotein A/B	ROAA_HUMAN	0.78	0.25
276	Heterogeneous nuclear ribonucleoprotein A0	ROA0_HUMAN	0.90	0.31
277	Heterogeneous nuclear ribonucleoprotein A1	ROA1_HUMAN	0.90	0.09
278	Heterogeneous nuclear ribonucleoprotein A3	ROA3_HUMAN	0.90	0.31
279	Heterogeneous nuclear ribonucleoprotein D0	HNRPD_HUMAN	0.78	0.02
280	Heterogeneous nuclear ribonucleoprotein D-like	HNRDL_HUMAN	0.97	0.42
281	Heterogeneous nuclear ribonucleoprotein F	HNRPF_HUMAN	0.87	0.33
282	Heterogeneous nuclear ribonucleoprotein G	HNRPG_HUMAN	0.73	0.01
283	Heterogeneous nuclear ribonucleoprotein H	HNRH1_HUMAN	1.00	0.98
284	Heterogeneous nuclear ribonucleoprotein H3	HNRH3_HUMAN	0.78	0.10
285	Heterogeneous nuclear ribonucleoprotein K	HNRPK_HUMAN	0.79	0.12
286	Heterogeneous nuclear ribonucleoprotein L	HNRPL_HUMAN	0.81	0.05
287	Heterogeneous nuclear ribonucleoprotein M	HNRPM_HUMAN	0.87	0.20
288	Heterogeneous nuclear ribonucleoprotein Q	HNRPQ_HUMAN	1.03	0.42
289	Heterogeneous nuclear ribonucleoprotein R	HNRPR_HUMAN	0.78	0.02
290	Heterogeneous nuclear ribonucleoprotein U	HNRPU_HUMAN	0.93	0.29
291	Heterogeneous nuclear ribonucleoproteins A2/B1	ROA2_HUMAN	0.71	0.00
292	Heterogeneous nuclear ribonucleoproteins C1/C2	HNRPC_HUMAN	0.73	0.02
293	High mobility group protein B1	HMGB1_HUMAN	1.37	0.07
294	High mobility group protein B2	HMGB2_HUMAN	1.11	0.31

295	High mobility group protein HMG-I/HMG-Y	HMGA1_HUMAN	0.84	0.17
296	Histone H1.4	H14_HUMAN	0.69	0.09
297	Histone H1.5	H15_HUMAN	0.64	0.02
298	Histone H2A type 2-B	H2A2B_HUMAN	0.28	0.01
299	Histone H2A.V	H2AV_HUMAN	0.84	0.03
300	Histone H2B type 1-J	H2B1J_HUMAN	0.64	0.01
301	Histone H3.1t	H31T_HUMAN	0.87	0.00
302	Histone H4	H4_HUMAN	0.76	0.07
303	HLA class I histocompatibility antigen, A-68 alpha chain	1A68_HUMAN	0.84	0.17
304	HLA class I histocompatibility antigen, B-15 alpha chain	1B15_HUMAN	1.35	0.22
305	Hsc70-interacting protein	F10A1_HUMAN	1.15	0.11
306	Hypoxia up-regulated protein 1	HYOU1_HUMAN	0.90	0.09
307	Importin subunit alpha-1	IMA1_HUMAN	1.14	0.65
308	Importin subunit beta-1	IMB1_HUMAN	1.19	0.03
309	Importin-5	IPO5_HUMAN	1.41	0.07
310	Importin-7	IPO7_HUMAN	1.52	0.01
311	Inorganic pyrophosphatase	IPYR_HUMAN	1.12	0.61
312	Inosine-5'-monophosphate dehydrogenase 2	IMDH2_HUMAN	1.03	0.80
313	Integrin alpha-11	ITA11_HUMAN	1.03	0.82
314	Integrin alpha-3	ITA3_HUMAN	1.43	0.24
315	Integrin beta-1	ITB1_HUMAN	1.07	0.29
316	Interleukin enhancer-binding factor 2	ILF2_HUMAN	0.68	0.03
317	Interleukin enhancer-binding factor 3	ILF3_HUMAN	0.64	0.04
318	Isocitrate dehydrogenase [NADP] cytoplasmic	IDHC_HUMAN	1.21	0.45
319	Isoleucyl-tRNA synthetase, cytoplasmic	SYIC_HUMAN	1.03	0.88
320	Keratin, type I cytoskeletal 10	K1C10_HUMAN	0.54	0.04
321	Keratin, type I cytoskeletal 17	K1C17_HUMAN	0.51	0.14
322	Keratin, type I cytoskeletal 18	K1C18_HUMAN	0.93	0.55
323	Keratin, type I cytoskeletal 9	K1C9_HUMAN	0.98	0.94
324	Keratin, type II cytoskeletal 1	K2C1_HUMAN	0.84	0.42
325	Keratin, type II cytoskeletal 2 epidermal	K22E_HUMAN	0.74	0.14
326	Keratin, type II cytoskeletal 7	K2C7_HUMAN	0.68	0.09
327	Keratin, type II cytoskeletal 8	K2C8_HUMAN	0.64	0.04
328	KH domain-containing RNA-binding signal trans.-assoc. protein 1	KHDR1_HUMAN	0.86	0.46
329	Kynureninase	KYNU_HUMAN	1.40	0.29
330	Lamin-A/C	LMNA_HUMAN	0.73	0.07
331	Lamin-B1	LMNB1_HUMAN	0.90	0.32
332	LanC-like protein 1	LANC1_HUMAN	0.72	0.30
333	Large neutral amino acids transporter small subunit 1	LAT1_HUMAN	0.29	0.03
334	Leucine-rich PPR motif-containing protein, mitochondrial	LPPRC_HUMAN	1.22	0.56
335	Leucine-rich repeat-containing protein 59	LRC59_HUMAN	0.93	0.68
336	Leucyl-tRNA synthetase, cytoplasmic	SYLC_HUMAN	0.90	0.31
337	LIM domain and actin-binding protein 1	LIMA1_HUMAN	0.90	0.31
338	L-lactate dehydrogenase A chain	LDHA_HUMAN	1.32	0.04
339	L-lactate dehydrogenase B chain	LDHB_HUMAN	1.23	0.17
340	Lupus La protein	LA_HUMAN	1.04	0.42
341	Lysosome-associated membrane glycoprotein 1	LAMP1_HUMAN	0.66	0.01
342	Lysyl-tRNA synthetase	SYK_HUMAN	1.07	0.29
343	Macrophage migration inhibitory factor	MIF_HUMAN	2.00	0.01
344	Malate dehydrogenase, mitochondrial	MDHM_HUMAN	1.19	0.15

345	Matrin-3	MATR3_HUMAN	0.73	0.49
346	Membrane-associated progesterone receptor component 2	PGRC2_HUMAN	0.90	0.50
347	Methionyl-tRNA synthetase, cytoplasmic	SYMC_HUMAN	0.90	0.32
348	Microsomal glutathione S-transferase 1	MGST1_HUMAN	0.81	0.08
349	Microtubule-associated protein RP/EB family member 1	MARE1_HUMAN	1.02	0.92
350	Mitochondrial carrier homolog 2	MTCH2_HUMAN	0.66	0.01
351	Mitochondrial inner membrane protein	IMMT_HUMAN	1.24	0.22
352	Moesin	MOES_HUMAN	1.03	0.87
353	Monocarboxylate transporter 1	MOT1_HUMAN	1.03	0.71
354	Monocarboxylate transporter 4	MOT4_HUMAN	0.92	0.64
355	mRNA turnover protein 4 homolog	MRT4_HUMAN	0.99	0.95
356	Multidrug resistance-associated protein 1	MRP1_HUMAN	0.74	0.41
357	Multifunctional protein ADE2	PUR6_HUMAN	0.91	0.56
358	Myb-binding protein 1A	MBB1A_HUMAN	0.84	0.62
359	Myoferlin	MYOF_HUMAN	0.69	0.15
360	Myosin light polypeptide 6	MYL6_HUMAN	0.73	0.02
361	Myosin regulatory light chain 12A	ML12A_HUMAN	0.74	0.35
362	Myosin-10	MYH10_HUMAN	1.03	0.71
363	Myosin-9	MYH9_HUMAN	0.90	0.42
364	Myristoylated alanine-rich C-kinase substrate	MARCS_HUMAN	1.52	0.05
365	N-acetylgalactosaminyltransferase 7	GALT7_HUMAN	0.68	0.01
366	NAD(P) transhydrogenase, mitochondrial	NNTM_HUMAN	0.94	0.42
367	NAD(P)H dehydrogenase [quinone] 1	NQO1_HUMAN	0.81	0.22
368	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 4	NDUA4_HUMAN	0.83	0.42
369	NADH-cytochrome b5 reductase 3	NB5R3_HUMAN	1.15	0.17
370	Nascent polypeptide-associated complex subunit alpha	NACA_HUMAN	1.37	0.01
371	Neuroblast differentiation-associated protein AHNK	AHNK_HUMAN	1.00	0.98
372	Neuroplastin	NPTN_HUMAN	0.76	0.11
373	Neutral alpha-glucosidase AB	GANAB_HUMAN	0.96	0.74
374	Neutral amino acid transporter B(0)	AAAT_HUMAN	1.10	0.75
375	Niban-like protein 1	NIBL1_HUMAN	1.34	0.30
376	Non-POU domain-containing octamer-binding protein	NONO_HUMAN	0.62	0.01
377	Non-specific lipid-transfer protein	NLTP_HUMAN	0.66	0.14
378	Nuclear migration protein nudC	NUDC_HUMAN	1.46	0.01
379	Nuclear pore complex protein Nup155	NU155_HUMAN	0.75	0.32
380	Nuclear pore complex protein Nup205	NU205_HUMAN	0.79	0.21
381	Nuclear ubiquitous casein and cyclin-dependent kinases substrate	NUCKS_HUMAN	0.80	0.37
382	Nuclease-sensitive element-binding protein 1	YBOX1_HUMAN	0.82	0.48
383	Nucleolar RNA helicase 2	DDX21_HUMAN	1.27	0.18
384	Nucleolin	NUCL_HUMAN	0.84	0.04
385	Nucleophosmin	NPM_HUMAN	1.11	0.10
386	Nucleoside diphosphate kinase A	NDKA_HUMAN	1.23	0.08
387	Nucleoside diphosphate kinase B	NDKB_HUMAN	1.62	0.03
388	Nucleosome assembly protein 1-like 1	NP1L1_HUMAN	1.28	0.10
389	PC4 and SFRS1-interacting protein	PSIP1_HUMAN	0.78	0.10
390	Peptidyl-prolyl cis-trans isomerase A	PPIA_HUMAN	1.74	0.00
391	Peptidyl-prolyl cis-trans isomerase B	PPIB_HUMAN	0.75	0.15
392	Peptidyl-prolyl cis-trans isomerase FKBP10	FKB10_HUMAN	0.96	0.69
393	Peptidyl-prolyl cis-trans isomerase FKBP4	FKBP4_HUMAN	1.37	0.14
394	Peroxiredoxin-1	PRDX1_HUMAN	0.87	0.33

395	Peroxiredoxin-2	PRDX2_HUMAN	0.71	0.00
396	Peroxiredoxin-4	PRDX4_HUMAN	1.15	0.29
397	Peroxiredoxin-5, mitochondrial	PRDX5_HUMAN	1.08	0.58
398	Peroxiredoxin-6	PRDX6_HUMAN	1.41	0.07
399	Phosphoglycerate kinase 1	PGK1_HUMAN	1.46	0.03
400	Phosphoglycerate mutase 1	PGAM1_HUMAN	1.19	0.04
401	Plasminogen activator inhibitor 1 RNA-binding protein	PAIRB_HUMAN	0.92	0.64
402	Plastin-3	PLST_HUMAN	1.62	0.01
403	Platelet-activating factor acetylhydrolase IB subunit beta	PA1B2_HUMAN	0.92	0.78
404	Plectin	PLEC_HUMAN	1.11	0.32
405	Podocalyxin	PODXL_HUMAN	0.79	0.12
406	Poly [ADP-ribose] polymerase 1	PARP1_HUMAN	0.75	0.15
407	Poly(rC)-binding protein 2	PCBP2_HUMAN	0.97	0.80
408	Polyadenylate-binding protein 1	PABP1_HUMAN	1.00	1.00
409	Polypeptide N-acetylgalactosaminyltransferase 2	GALT2_HUMAN	0.62	0.00
410	Polypyrimidine tract-binding protein 1	PTBP1_HUMAN	1.03	0.87
411	Pre-mRNA-processing factor 19	PRP19_HUMAN	0.93	0.29
412	Pre-mRNA-processing-splicing factor 8	PRP8_HUMAN	0.66	0.08
413	Probable ATP-dependent RNA helicase DDX17	DDX17_HUMAN	0.66	0.01
434	Probable ATP-dependent RNA helicase DDX5	DDX5_HUMAN	0.86	0.51
415	Procollagen galactosyltransferase 1	GT251_HUMAN	0.54	0.10
416	Profilin-1	PROF1_HUMAN	1.80	0.01
417	Programmed cell death 6-interacting protein	PDC6I_HUMAN	1.47	0.17
418	Programmed cell death protein 6	PDCD6_HUMAN	0.59	0.03
419	Prohibitin-2	PHB2_HUMAN	1.23	0.08
420	Proliferating cell nuclear antigen	PCNA_HUMAN	1.01	0.97
421	Proliferation-associated protein 2G4	PA2G4_HUMAN	1.19	0.03
422	Prostaglandin E synthase 3	TEBP_HUMAN	0.93	0.00
423	Prostaglandin F2 receptor negative regulator	FPRP_HUMAN	0.93	0.00
424	Proteasome activator complex subunit 2	PSME2_HUMAN	1.04	0.69
425	Proteasome activator complex subunit 3	PSME3_HUMAN	0.67	0.14
426	Proteasome subunit alpha type-3	PSA3_HUMAN	1.08	0.58
427	Proteasome subunit alpha type-4	PSA4_HUMAN	0.81	0.32
428	Proteasome subunit alpha type-5	PSA5_HUMAN	1.32	0.00
429	Proteasome subunit alpha type-6	PSA6_HUMAN	0.86	0.46
430	Proteasome subunit beta type-3	PSB3_HUMAN	1.36	0.05
431	Protein disulfide-isomerase	PDIA1_HUMAN	0.78	0.20
432	Protein disulfide-isomerase A3	PDIA3_HUMAN	0.90	0.32
433	Protein disulfide-isomerase A4	PDIA4_HUMAN	0.87	0.11
434	Protein disulfide-isomerase A6	PDIA6_HUMAN	0.90	0.32
435	Protein ERGIC-53	LMAN1_HUMAN	0.69	0.05
436	Protein S100-A10	S10AA_HUMAN	0.61	0.03
437	Protein S100-A11	S10AB_HUMAN	0.87	0.34
438	Protein S100-A4	S10A4_HUMAN	0.57	0.03
439	Protein S100-A6	S10A6_HUMAN	1.07	0.29
440	Protein SET	SET_HUMAN	1.19	0.04
441	Protein transport protein Sec31A	SC31A_HUMAN	0.60	0.02
442	Puromycin-sensitive aminopeptidase	PSA_HUMAN	1.10	0.56
443	Put. pre-mRNA-splicing factor ATP-dependent RNA helicase DHX15	DHX15_HUMAN	0.87	0.00
444	Putative RNA-binding protein Luc7-like 2	LC7L2_HUMAN	0.71	0.07

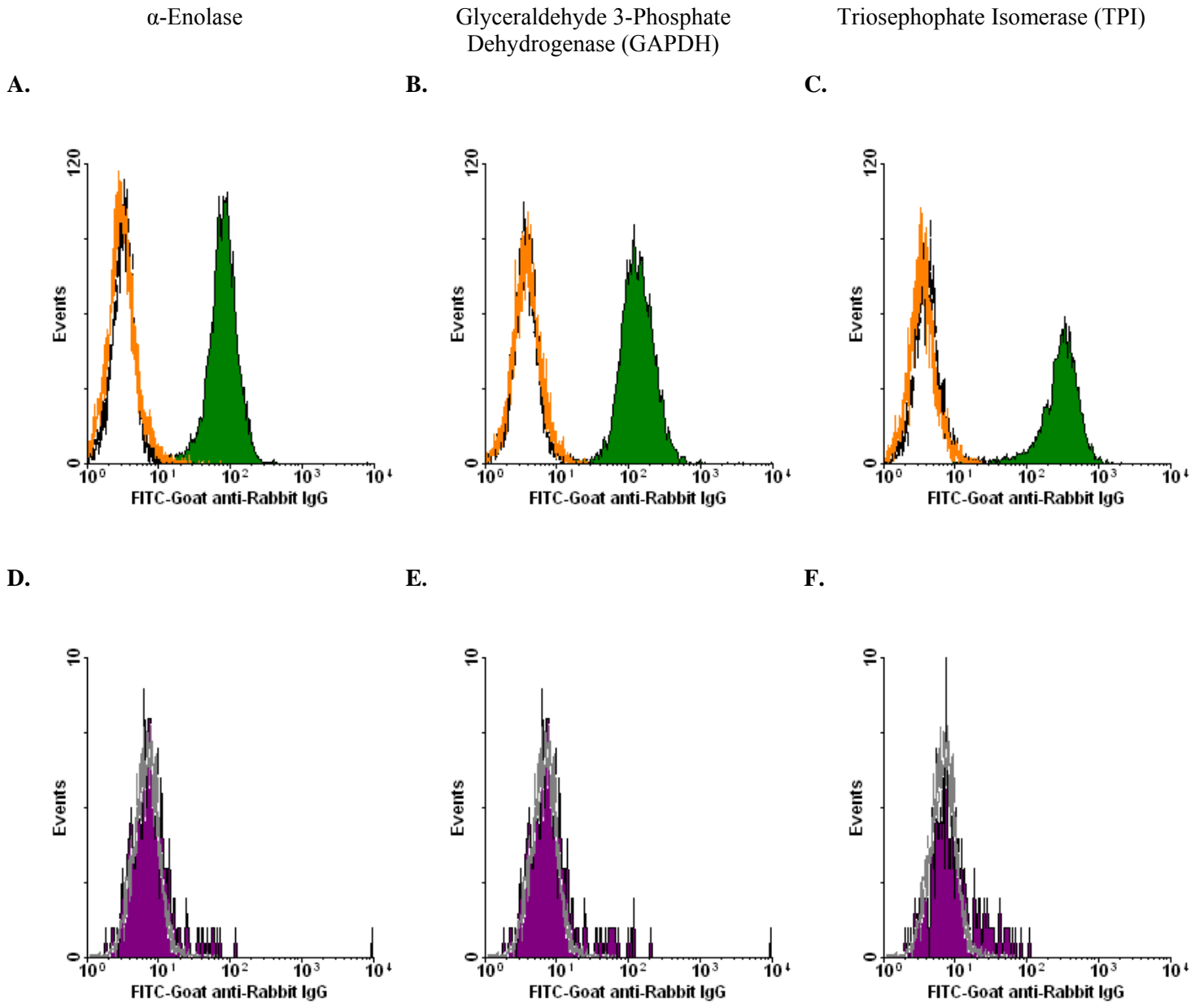
445	Pyruvate carboxylase, mitochondrial	PYC_HUMAN	0.85	0.71
446	Pyruvate dehydrogenase E1 component subunit beta, mitochondrial	ODPB_HUMAN	0.87	0.00
447	Pyruvate kinase isozymes M1/M2	KPYM_HUMAN	1.11	0.09
448	Radixin	RADI_HUMAN	0.81	0.32
449	Ran-specific GTPase-activating protein	RANG_HUMAN	1.52	0.08
450	Ras GTPase-activating protein-binding protein 1	G3BP1_HUMAN	0.97	0.82
451	Ras GTPase-activating-like protein IQGAP1	IQGA1_HUMAN	1.06	0.70
452	Ras-related protein Rab-1B	RAB1B_HUMAN	1.28	0.02
453	Ras-related protein Rab-2A	RAB2A_HUMAN	1.23	0.18
454	Ras-related protein Rab-7a	RAB7A_HUMAN	0.87	0.29
455	Ras-related protein Ral-A	RALA_HUMAN	1.07	0.68
456	Ras-related protein Rap-1b	RAP1B_HUMAN	0.79	0.39
457	Replication protein A 70 kDa DNA-binding subunit	RFA1_HUMAN	1.23	0.11
458	Reticulocalbin-1	RCN1_HUMAN	0.75	0.15
459	Reticulon-3	RTN3_HUMAN	0.90	0.32
460	Reticulon-4	RTN4_HUMAN	0.71	0.02
461	Rho GDP-dissociation inhibitor 1	GDIR1_HUMAN	1.42	0.11
462	Ribonucleoside-diphosphate reductase large subunit	RIR1_HUMAN	1.11	0.32
463	Ribose-phosphate pyrophosphokinase 1	PRPS1_HUMAN	0.82	0.18
464	Ribosomal protein S6 kinase alpha-1	KS6A1_HUMAN	0.71	0.07
465	Ribosome-binding protein 1	RRBP1_HUMAN	1.27	0.18
466	RNA-binding protein 8A	RBM8A_HUMAN	1.07	0.29
467	RNA-binding protein FUS	FUS_HUMAN	0.87	0.33
468	RNA-binding protein Musashi homolog 2	MSI2H_HUMAN	0.71	0.36
469	rRNA 2'-O-methyltransferase fibrillar	FBRL_HUMAN	0.75	0.30
470	RuvB-like 1	RUVB1_HUMAN	0.97	0.71
471	RuvB-like 2	RUVB2_HUMAN	1.03	0.42
472	Sarcoplasmic/endoplasmic reticulum calcium ATPase 2	AT2A2_HUMAN	1.11	0.32
473	Septin-7	SEPT7_HUMAN	1.12	0.75
474	Serine hydroxymethyltransferase, mitochondrial	GLYM_HUMAN	0.92	0.64
475	Serine/threonine-protein phosphatase PP1-beta catalytic subunit	PP1B_HUMAN	0.72	0.23
476	Serine-threonine kinase receptor-associated protein	STRAP_HUMAN	1.11	0.32
477	Serpin H1	SERPH_HUMAN	0.81	0.05
478	Signal recognition particle 14 kDa protein	SRP14_HUMAN	0.92	0.69
479	Signal recognition particle 9 kDa protein	SRP09_HUMAN	0.84	0.04
480	Single-stranded DNA-binding protein, mitochondrial	SSBP_HUMAN	0.90	0.32
481	Small nuclear ribonucleoprotein G-like protein	RUXGL_HUMAN	0.79	0.44
482	Small nuclear ribonucleoprotein Sm D3	SMD3_HUMAN	0.61	0.03
483	Small nuclear ribonucleoprotein-associated proteins B and B'	RSMB_HUMAN	0.32	0.03
484	Sodium- and chloride-dependent taurine transporter	SC6A6_HUMAN	1.46	0.09
485	Sodium/potassium-transporting ATPase subunit alpha-1	AT1A1_HUMAN	1.00	0.97
486	Sodium/potassium-transporting ATPase subunit beta-1	AT1B1_HUMAN	1.18	0.22
487	Sodium/potassium-transporting ATPase subunit beta-3	AT1B3_HUMAN	0.84	0.17
488	Solute carrier family 2, facilitated glucose transporter member 1	GTR1_HUMAN	0.74	0.33
489	Sorcin	SORCN_HUMAN	0.92	0.69
490	Spectrin alpha chain, brain	SPTA2_HUMAN	0.97	0.42
491	Spectrin beta chain, brain 1	SPTB2_HUMAN	1.46	0.01
492	S-phase kinase-associated protein 1	SKP1_HUMAN	0.97	0.42
493	Splicing factor 3B subunit 2	SF3B2_HUMAN	0.97	0.71
494	Splicing factor 3B subunit 3	SF3B3_HUMAN	0.91	0.56

495	Splicing factor U2AF 65 kDa subunit	U2AF2_HUMAN	0.50	0.18
496	Splicing factor, arginine/serine-rich 1	SFRS1_HUMAN	0.81	0.11
497	Splicing factor, arginine/serine-rich 6	SFRS6_HUMAN	0.66	0.01
498	Splicing factor, proline- and glutamine-rich	SFPQ_HUMAN	0.84	0.03
499	Staphylococcal nuclease domain-containing protein 1	SND1_HUMAN	0.91	0.64
500	Stathmin	STMN1_HUMAN	2.07	0.00
501	Stress-70 protein, mitochondrial	GRP75_HUMAN	0.90	0.42
502	Stress-induced-phosphoprotein 1	STIP1_HUMAN	1.23	0.08
503	Succinate dehydrogenase [ubiquinone] flavoprotein subunit, mito	DHSA_HUMAN	0.93	0.00
504	Succinyl-CoA:3-ketoacid-coenzyme A transferase 1, mitochondrial	SCOT1_HUMAN	0.78	0.20
505	SUMO-conjugating enzyme UBC9	UBC9_HUMAN	1.81	0.02
506	Superoxide dismutase [Cu-Zn]	SODC_HUMAN	1.36	0.05
507	Syndecan-2	SDC2_HUMAN	1.36	0.12
508	Talin-1	TLN1_HUMAN	1.07	0.42
509	T-complex protein 1 subunit alpha	TCPA_HUMAN	0.84	0.15
510	T-complex protein 1 subunit delta	TCPD_HUMAN	1.19	0.30
511	T-complex protein 1 subunit epsilon	TCPE_HUMAN	1.74	0.01
512	T-complex protein 1 subunit eta	TCPH_HUMAN	1.43	0.18
513	T-complex protein 1 subunit gamma	TCPG_HUMAN	1.32	0.04
534	T-complex protein 1 subunit theta	TCPQ_HUMAN	1.46	0.03
515	T-complex protein 1 subunit zeta	TCPZ_HUMAN	1.00	0.98
516	Thioredoxin	THIO_HUMAN	1.56	0.03
517	Thioredoxin domain-containing protein 17	TXD17_HUMAN	1.47	0.17
518	Thioredoxin domain-containing protein 5	TXND5_HUMAN	0.97	0.80
519	Threonyl-tRNA synthetase, cytoplasmic	SYTC_HUMAN	1.07	0.42
520	Thymidylate kinase	KTHY_HUMAN	0.81	0.05
521	Trans-2,3-enoyl-CoA reductase	TECR_HUMAN	0.64	0.08
522	Transcription factor BTF3	BTF3_HUMAN	0.91	0.64
523	Transferrin receptor protein 1	TFR1_HUMAN	0.93	0.29
524	Transformer-2 protein homolog beta	TRA2B_HUMAN	0.79	0.18
525	Transforming protein RhoA	RHOA_HUMAN	1.19	0.42
526	Transgelin	TAGL_HUMAN	1.32	0.03
527	Transgelin-2	TAGL2_HUMAN	1.68	0.05
528	Transitional endoplasmic reticulum ATPase	TERA_HUMAN	0.94	0.70
529	Transketolase	TKT_HUMAN	0.96	0.69
530	Translationally-controlled tumor protein	TCTP_HUMAN	1.64	0.11
531	Translocon-associated protein subunit alpha	SSRA_HUMAN	0.73	0.12
532	Transmembrane protein 97	TMM97_HUMAN	1.27	0.08
533	Transportin-1	TNPO1_HUMAN	1.34	0.28
534	Trifunctional enzyme subunit alpha, mitochondrial	ECHA_HUMAN	0.81	0.05
535	Trifunctional purine biosynthetic protein adenosine-3	PUR2_HUMAN	0.86	0.42
536	Triosephosphate isomerase	TPIS_HUMAN	1.36	0.05
537	Tripeptidyl-peptidase 2	TPP2_HUMAN	0.92	0.78
538	tRNA (cytosine-5-)-methyltransferase NSUN2	NSUN2_HUMAN	1.28	0.52
539	Tropomyosin alpha-3 chain	TPM3_HUMAN	1.19	0.15
540	Tropomyosin alpha-4 chain	TPM4_HUMAN	1.11	0.10
541	Trypsin-2	TRY2_HUMAN	0.70	0.11
542	Tryptophanyl-tRNA synthetase, cytoplasmic	SYWC_HUMAN	1.04	0.79
543	Tubulin alpha-4A chain	TBA4A_HUMAN	0.71	0.22
544	Tubulin beta chain	TBB5_HUMAN	0.76	0.00

545	Tubulin beta-2C chain	TBB2C_HUMAN	0.76	0.11
546	Tubulin beta-4 chain	TBB4_HUMAN	0.60	0.05
547	Tubulin--tyrosine ligase-like protein 12	TTL12_HUMAN	1.18	0.52
548	Tyrosine-protein kinase BAZ1B	BAZ1B_HUMAN	0.78	0.46
549	Tyrosyl-tRNA synthetase, cytoplasmic	SYYC_HUMAN	1.36	0.05
550	U1 small nuclear ribonucleoprotein 70 kDa	RU17_HUMAN	0.93	0.55
551	U2 small nuclear ribonucleoprotein A'	RU2A_HUMAN	1.00	1.00
552	U5 small nuclear ribonucleoprotein 200 kDa helicase	U520_HUMAN	1.00	1.00
553	Ubiquitin-40S ribosomal protein S27a	RS27A_HUMAN	1.82	0.08
554	Ubiquitin-like modifier-activating enzyme 1	UBA1_HUMAN	1.36	0.05
555	UPF0556 protein C19orf10	CS010_HUMAN	0.40	0.07
556	Vesicle-trafficking protein SEC22b	SC22B_HUMAN	1.03	0.71
557	Vesicular integral-membrane protein VIP36	LMAN2_HUMAN	0.82	0.25
558	Vigilin	VIGLN_HUMAN	0.76	0.03
559	Vimentin	VIME_HUMAN	1.03	0.71
560	Voltage-dependent anion-selective channel protein 1	VDAC1_HUMAN	0.93	0.58
561	Voltage-dependent anion-selective channel protein 2	VDAC2_HUMAN	0.84	0.17
562	WD repeat-containing protein 1	WDR1_HUMAN	1.37	0.23
563	X-ray repair cross-complementing protein 5	XRCC5_HUMAN	0.68	0.03
564	X-ray repair cross-complementing protein 6	XRCC6_HUMAN	0.87	0.11

The relative abundance of all 564 proteins identified in the comparative iTRAQ analysis of apoptotic and viable membrane vesicles are listed.

Supplemental Figure 1: Glycolytic enzyme molecules are not externalized on autophagic or necrotic cells.



Supplemental Figure 2: Apoptotic externalization of glycolytic enzyme molecules is caspase-dependent.

A. α -Enolase

B. Glyceraldehyde 3-Phosphate
Dehydrogenase (GAPDH)

C. Triosephosphate Isomerase (TPI)

