Supporting Information

Dual inhibition of EGFR at protein and activity level via combinatorial blocking of PI4KIIα as anti-tumor strategy

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Running Title: PI4KIIα, an ideal combinatorial target for EGFR treatment

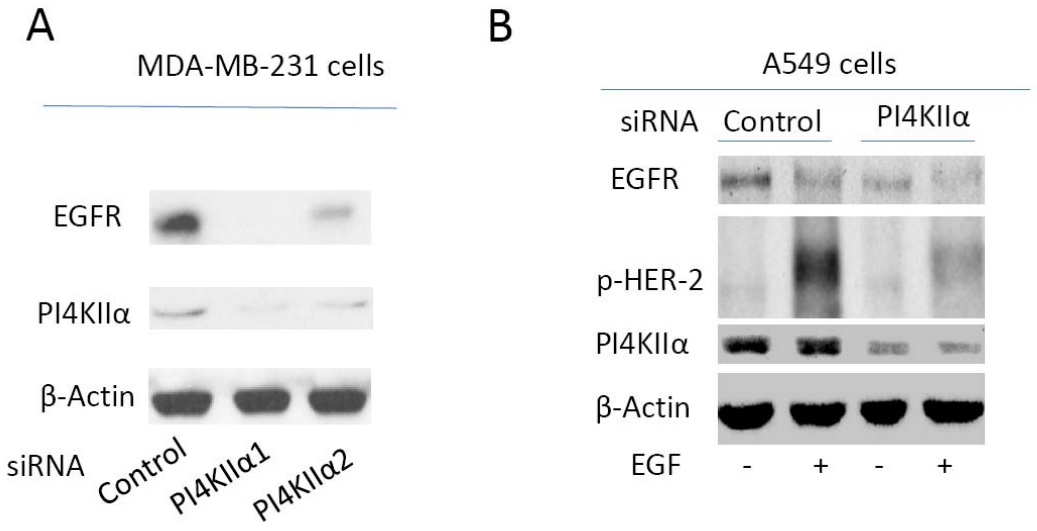

Figure S1. **Effect of PI4KIIα knockdown in different cell lines on EGFR protein levels. A)** MDA-MB-231 cells. **B)** A549 cells. Cells were transfected with either control siRNA or PI4KIIα siRNA (PI4KIIα 1 and PI4KIIα 2 refer to siRNA targeting different site of the PI4KIIα mRNA) for 72 hours, and then treated 100 ng/ml EGF for 10 minutes, except controls, and proteins indicated measured by Western blot. All results presented above represent data from three independent experiments.

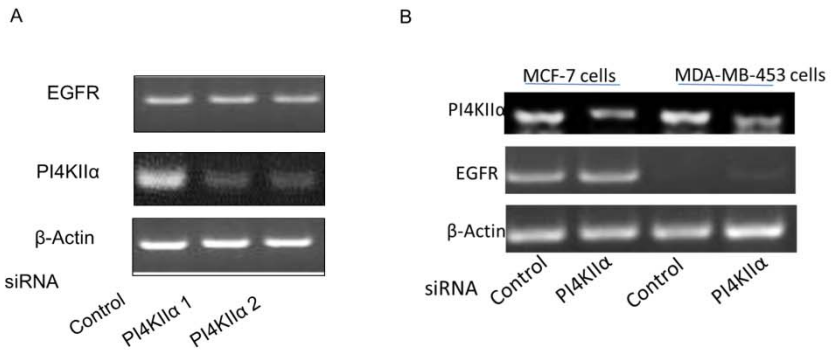

Figure S2. PI4KIIα knockdown not affect EGFR transcription level. A) MCF-7 cells were transfected with control siRNA or two different PI4KIIα siRNAs for 72 hours. mRNA levels of EGFR and PI4KIIα. B) MCF-7 cells and MDA-MB-435 cells were transfected with control or PI4KIIα siRNA for 72 hours, and levels of EGFR and PI4KIIα mRNA measured.

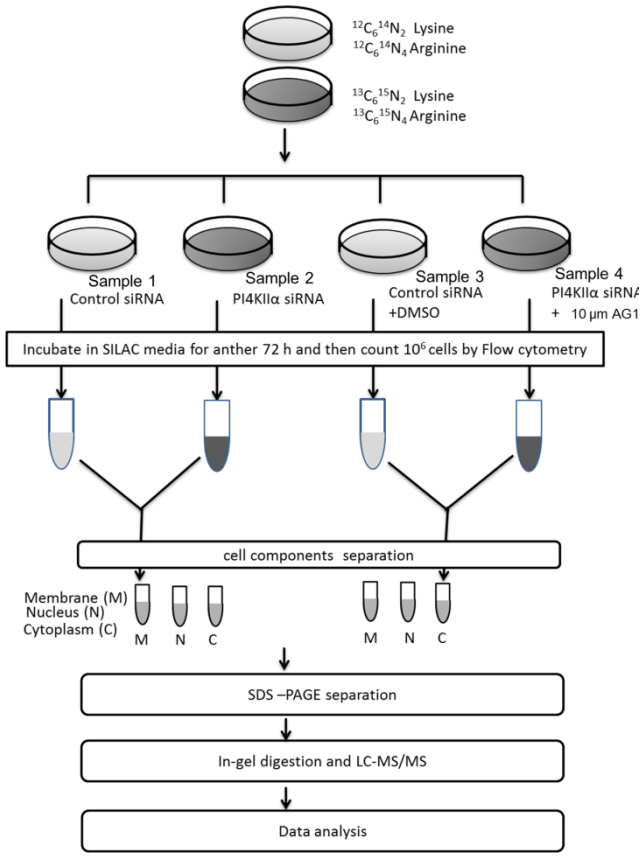

Figure S3. **Proteomics analysis of molecular networks affected by PI4KIIα knockdown or dual inhibition by SILAC and LC-MS/MS.** Schematic flowchart for the discovery of molecular networks regulated by PI4K and EGFR dual inhibition in MCF-7 cells. Detailed information was described in method section.

Table S1. Protein targets identified by SILAC and LC-MS/MS for control RNAi MCF-7 cells (sample 1) and PI4KIIα RNAi MCF-7 cells (sample 2).

Accession	Description	Heavy/Light*
O94776	Metastasis-associated protein MTA2	0.22
P04040	Catalase	0.24
P14923	Junction plakoglobin	0.26
Q08945	FACT complex subunit SSRP1	0.26
Q9UMS4	Pre-mRNA-processing factor 19	0.26
P12270	Nucleoprotein TPR	0.26
P08670	Vimentin	0.27
P09874	Poly [ADP-ribose] polymerase 1	0.28
Q9BTV4	Transmembrane protein 43	0.29
Q14690	Protein RRP5 homolog	0.30
Q15269	Periodic tryptophan protein 2 homolog	0.31
P14866	Heterogeneous nuclear ribonucleoprotein L	0.32
P23246	Splicing factor, proline- and glutamine-rich	0.32
Q9BQ39	ATP-dependent RNA helicase DDX50	0.33
O43143	Putative pre-mRNA-splicing factor ATP-dependent RNA helicase DHX15	0.34
Q13151	Heterogeneous nuclear ribonucleoprotein A0	0.34
O75533	Splicing factor 3B subunit 1	0.35
H0Y8X1	Succinate dehydrogenase [ubiquinone] flavoprotein subunit, mitochondrial	0.35
H0YDK2	Histone-binding protein RBBP4 (Fragment)	0.35
Q99436	Proteasome subunit beta type-7	0.35
P36871	Phosphoglucomutase-1	0.36
Q9NVP1	ATP-dependent RNA helicase DDX18	0.36
P35237	Serpin B6	0.37
Q13347	Eukaryotic translation initiation factor 3 subunit I	0.38
P30740	Leukocyte elastase inhibitor	0.38
P48147	Prolyl endopeptidase	0.39
E9PBF6	Lamin-B1	0.39

Q08211	ATP-dependent RNA helicase A	0.39
P12004	Proliferating cell nuclear antigen	0.40
P04080	Cystatin-B	0.40
Q96GQ7	Probable ATP-dependent RNA helicase DDX27	0.40
P14550	Alcohol dehydrogenase [NADP(+)]	0.40
Q16795	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 9, mitochondrial	0.41
P24539	ATP synthase subunit b, mitochondrial	0.42
O15427	Monocarboxylate transporter 4	0.42
Q8TDN6	Ribosome biogenesis protein BRX1 homolog	0.42
P32119	Peroxiredoxin-2	0.43
P22087	rRNA 2'-O-methyltransferase fibrillarin	0.43
P05386	60S acidic ribosomal protein P1	0.43
Q15645	Pachytene checkpoint protein 2 homolog	0.43
O00487	26S proteasome non-ATPase regulatory subunit 14	0.44
Q6S8J3	POTE ankyrin domain family member E	0.44
Q09666	Neuroblast differentiation-associated protein AHNAK	0.45
P16152	Carbonyl reductase [NADPH] 1	0.45
P28072	Proteasome subunit beta type-6	0.45
Q7KZF4	Staphylococcal nuclease domain-containing protein 1	0.45
P52907	F-actin-capping protein subunit alpha-1	0.45
P52292	Importin subunit alpha-2	0.45
P25787	Proteasome subunit alpha type-2	0.46
P08574	Cytochrome c1, heme protein, mitochondrial	0.46
P24534	Elongation factor 1-beta	0.46
Q15393	Splicing factor 3B subunit 3	0.46
P28066	Proteasome subunit alpha type-5	0.47
P26447	Protein S100-A4	0.47
P37802	Transgelin-2	0.47
O75874	Isocitrate dehydrogenase [NADP] cytoplasmic	0.47
P20618	Proteasome subunit beta type-1	0.48
Q9Y2X3	Nucleolar protein 58	0.48

P62269	40S ribosomal protein S18	0.48
O95678	Keratin, type II cytoskeletal 75	0.48
P80723	Brain acid soluble protein 1	0.48
Q14566	DNA replication licensing factor MCM6	0.48
P00966	Argininosuccinate synthase	0.48
P22314	Ubiquitin-like modifier-activating enzyme 1	0.48
P28070	Proteasome subunit beta type-4	0.48
O75643	U5 small nuclear ribonucleoprotein 200 kDa helicase	0.49
P13010	X-ray repair cross-complementing protein 5	0.49
Q6P2Q9	Pre-mRNA-processing-splicing factor 8	0.49
P49915	GMP synthase [glutamine-hydrolyzing]	0.49
P30041	Peroxiredoxin-6	0.49
E9PBV3	Suprabasin	0.50
P53985	Monocarboxylate transporter 1	0.50
Q99497	Protein DJ-1	0.50
P34932	Heat shock 70 kDa protein 4	0.50
P41091	Eukaryotic translation initiation factor 2 subunit 3	0.50
Q96CS3	FAS-associated factor 2	0.50
P78527	DNA-dependent protein kinase catalytic subunit	0.51
Q9NQR4	Omega-amidase NIT2	0.51
Q9BYZ2	L-lactate dehydrogenase A-like 6B	0.51
O00116	Alkyldihydroxyacetonephosphate synthase, peroxisomal	0.51
O43242	26S proteasome non-ATPase regulatory subunit 3	0.51
P08238	Heat shock protein HSP 90-beta	0.51
P49257	Protein ERGIC-53	0.52
O95373	Importin-7	0.52
P31930	Cytochrome b-c1 complex subunit 1, mitochondrial	0.52
P30084	Enoyl-CoA hydratase, mitochondrial	0.53
P61353	60S ribosomal protein L27	0.53
P17931	Galectin-3	0.53
P25705	ATP synthase subunit alpha, mitochondrial	0.53

P52597	Heterogeneous nuclear ribonucleoprotein F	0.53
Q9BWD1	Acetyl-CoA acetyltransferase, cytosolic	0.53
P62081	40S ribosomal protein S7	0.53
P25398	40S ribosomal protein S12	0.53
P60903	Protein S100-A10	0.54
P62854	40S ribosomal protein S26	0.54
P48637	Glutathione synthetase	0.54
P46777	60S ribosomal protein L5	0.54
E9PK82	40S ribosomal protein S3 (Fragment)	0.54
O14980	Exportin-1	0.54
P43121	Cell surface glycoprotein MUC18	0.54
O43707	Alpha-actinin-4	0.54
Q14126	Desmoglein-2	0.54
Q9BVC6	Transmembrane protein 109	0.55
O75131	Copine-3	0.55
P08754	Guanine nucleotide-binding protein G(k) subunit alpha	0.55
P23526	Adenosylhomocysteinase	0.55
P62906	60S ribosomal protein L10a	0.55
P10599	Thioredoxin	0.55
P49721	Proteasome subunit beta type-2	0.56
P37837	Transaldolase	0.56
Q6ZS74	Ras-related protein Ral-B	0.56
P00491	Purine nucleoside phosphorylase	0.56
P40429	60S ribosomal protein L13a	0.56
P30050	60S ribosomal protein L12	0.57
Q08380	Galectin-3-binding protein	0.57
P26373	60S ribosomal protein L13	0.57
P27348	14-3-3 protein theta	0.57
P17301	Integrin alpha-2	0.58
P62701	40S ribosomal protein S4, X isoform	0.58
P31947	14-3-3 protein sigma	0.58

P15121	Aldose reductase	0.59
P08708	40S ribosomal protein S17	0.59
P62266	40S ribosomal protein S23	0.59
P32970	CD70 antigen	0.59
Q01650	Large neutral amino acids transporter small subunit 1	0.59
P21266	Glutathione S-transferase Mu 3	0.59
Q14151	Scaffold attachment factor B2	0.59
P50914	60S ribosomal protein L14	0.59
Q16719	Kynureninase	0.60
Q9BVK6	Transmembrane emp24 domain-containing protein 9	0.60
P46782	40S ribosomal protein S5	0.60
Q9BS26	Endoplasmic reticulum resident protein 44	0.60
P38919	Eukaryotic initiation factor 4A-III	0.60
Q99714	3-hydroxyacyl-CoA dehydrogenase type-2	0.60
P35268	60S ribosomal protein L22	0.60
P46781	40S ribosomal protein S9	0.60
P31153	S-adenosylmethionine synthase isoform type-2	0.61
P51571	Translocon-associated protein subunit delta	0.61
P46778	60S ribosomal protein L21	0.62
P00403	Cytochrome c oxidase subunit 2	0.62
P62280	40S ribosomal protein S11	0.63
P52888	Thimet oligopeptidase	0.63
P06703	Protein S100-A6	0.63
P19338	Nucleolin	0.63
O00299	Chloride intracellular channel protein 1	0.63
P62249	40S ribosomal protein S16	0.63
P84243	Histone H3.3	0.63
Q9Y3U8	60S ribosomal protein L36	0.63
Q8NFJ5	Retinoic acid-induced protein 3	0.64
P00492	Hypoxanthine-guanine phosphoribosyltransferase	0.64
P61586	Transforming protein RhoA	0.64

Q12905	Interleukin enhancer-binding factor 2	0.64
P26038	Moesin	0.65
Q00839	Heterogeneous nuclear ribonucleoprotein U	0.65
P07814	Bifunctional glutamate/proline--tRNA ligase	0.66
Q99650	Oncostatin-M-specific receptor subunit beta	0.66
P05198	Eukaryotic translation initiation factor 2 subunit 1	0.66
H7BZJ3	Thioredoxin (Fragment)	0.66
P49755	Transmembrane emp24 domain-containing protein 10	0.66
Q562R1	Beta-actin-like protein 2	0.66
P62263	40S ribosomal protein S14	0.67
Q07021	Complement component 1 Q subcomponent-binding protein, mitochondrial	0.67
I3L4N8	Actin, cytoplasmic 2 (Fragment)	0.68
P58107	Epiplakin	0.68
P13667	Protein disulfide-isomerase A4	0.68
P14625	Endoplasmin	0.68
P13639	Elongation factor 2	0.69
Q96AG4	Leucine-rich repeat-containing protein 59	0.69
P35579	Myosin-9	0.71
F5H867	4F2 cell-surface antigen heavy chain (Fragment)	0.71
Q9Y6M5	Zinc transporter 1	0.71
P11717	Cation-independent mannose-6-phosphate receptor	0.72
P21796	Voltage-dependent anion-selective channel protein 1	0.72
Q15365	Poly(rC)-binding protein 1	0.72
Q15738	Sterol-4-alpha-carboxylate 3-dehydrogenase, decarboxylating	0.72
Q969H8	UPF0556 protein C19orf10	0.73
P04406	Glyceraldehyde-3-phosphate dehydrogenase	0.73
P49327	Fatty acid synthase	0.74
Q9H3N1	Thioredoxin-related transmembrane protein 1	0.74
P27797	Calreticulin	0.74
P38646	Stress-70 protein, mitochondrial	0.74
P62805	Histone H4	0.75

P04083	Annexin A1	0.75
Q9Y490	Talin-1	0.75
P46940	Ras GTPase-activating-like protein IQGAP1	0.75
P23284	Peptidyl-prolyl cis-trans isomerase B	0.76
Q15907	Ras-related protein Rab-11B	0.76
P05556	Integrin beta-1	0.77
Q06830	Peroxiredoxin-1	0.77
O95573	Long-chain-fatty-acid--CoA ligase 3	0.78
P00505	Aspartate aminotransferase, mitochondrial	0.78
P30043	Flavin reductase (NADPH)	0.78
P43007	Neutral amino acid transporter A	0.79
P55809	Succinyl-CoA:3-ketoacid coenzyme A transferase 1, mitochondrial	0.79
Q14764	Major vault protein	0.79
P54920	Alpha-soluble NSF attachment protein	0.81
Q13011	Delta(3,5)-Delta(2,4)-dienoyl-CoA isomerase, mitochondrial	0.81
P23458	Tyrosine-protein kinase JAK1	0.82
P12277	Creatine kinase B-type	0.82
Q9Y5M8	Signal recognition particle receptor subunit beta	0.82
P01891	HLA class I histocompatibility antigen, A-68 alpha chain	0.82
Q9UBS4	DnaJ homolog subfamily B member 11	0.83
O96008	Mitochondrial import receptor subunit TOM40 homolog	0.83
P07195	L-lactate dehydrogenase B chain	0.84
P84095	Rho-related GTP-binding protein RhoG	0.84
P68371	Tubulin beta-4B chain	0.86
O15173	Membrane-associated progesterone receptor component 2	0.86
Q96QK1	Vacuolar protein sorting-associated protein 35	0.87
Q01581	Hydroxymethylglutaryl-CoA synthase, cytoplasmic	0.87
B4DXP9	Alpha-centractin	0.88
P55072	Transitional endoplasmic reticulum ATPase	0.88
P61026	Ras-related protein Rab-10	0.91
P60842	Eukaryotic initiation factor 4A-I	0.92

Q9UQ80	Proliferation-associated protein 2G4	0.93
Q9Y678	Coatomer subunit gamma-1	0.93
Q9H853	Putative tubulin-like protein alpha-4B	0.94
Q9Y696	Chloride intracellular channel protein 4	0.95
Q02790	Peptidyl-prolyl cis-trans isomerase FKBP4	0.96
Q8TEM1	Nuclear pore membrane glycoprotein 210	0.96
Q13162	Peroxiredoxin-4	0.97
Q9Y617	Phosphoserine aminotransferase	1.00
P56199	Integrin alpha-1	1.00
P04843	Dolichyl-diphosphooligosaccharide--protein glycosyltransferase subunit 1	1.02
P06733	Alpha-enolase	1.02
P07737	Profilin-1	1.02
P04792	Heat shock protein beta-1	1.02
P35579	Myosin-9	1.03
Q92616	Translational activator GCN1	1.03
O75396	Vesicle-trafficking protein SEC22b	1.04
Q04917	14-3-3 protein eta	1.05
Q8NF37	Lysophosphatidylcholine acyltransferase 1	1.06
Q9UBF2	Coatomer subunit gamma-2	1.10
P11169	Solute carrier family 2, facilitated glucose transporter member 3	1.12
Q9UL25	Ras-related protein Rab-21	1.14
P61981	14-3-3 protein gamma	1.14
Q15758	Neutral amino acid transporter B(0)	1.16
Q15181	Inorganic pyrophosphatase	1.17
P18669	Phosphoglycerate mutase 1	1.18
Q9UQE7	Structural maintenance of chromosomes protein 3	1.28
P11021	78 kDa glucose-regulated protein	1.29
P05141	ADP/ATP translocase 2	1.33
P05362	Intercellular adhesion molecule 1	1.33
P05161	Ubiquitin-like protein ISG15	1.37
P12236	ADP/ATP translocase 3	1.38

P41250	Glycine--tRNA ligase	1.48
P49588	Alanine--tRNA ligase, cytoplasmic	1.55
P35232	Prohibitin	1.62
O43175	D-3-phosphoglycerate dehydrogenase	1.74
P49411	Elongation factor Tu, mitochondrial	1.82
P42704	Leucine-rich PPR motif-containing protein, mitochondrial	2.15
P10809	60 kDa heat shock protein, mitochondrial	2.73

*：Heavy/Light means the protein expression ratio of PI4KII α RNAi MCF-7 cells to Control cells.

Table S2. Protein targets identified by SILAC and LC-MS/MS for control MCF-7 cells (sample 3) and combined inhibition MCF-7 cells (sample 4).

Accession	Description	Heavy/Light*
Q09666	Neuroblast differentiation-associated protein AHNAK	0.21
Q15459	Splicing factor 3A subunit 1	0.28
P16401	Histone H1.5	0.29
Q92945	Far upstream element-binding protein 2	0.34
Q9UNX4	WD repeat-containing protein 3	0.34
Q96PK6	RNA-binding protein 14	0.36
O94776	Metastasis-associated protein MTA2	0.38
Q05048	Cleavage stimulation factor subunit 1	0.41
O15213	WD repeat-containing protein 46	0.43
P14866	Heterogeneous nuclear ribonucleoprotein L	0.43
Q8NI36	WD repeat-containing protein 36	0.44
H7C267	Pescadillo homolog (Fragment)	0.45
Q15393	Splicing factor 3B subunit 3	0.45
P08670	Vimentin	0.46
P46063	ATP-dependent DNA helicase Q1	0.46
Q12996	Cleavage stimulation factor subunit 3	0.46
Q9BV38	WD repeat-containing protein 18	0.46
P15924	Desmoplakin	0.47
F6XZQ7	Glutathione S-transferase Mu 2	0.48
P26599	Polypyrimidine tract-binding protein 1	0.48
P11387	DNA topoisomerase 1	0.48
P09874	Poly [ADP-ribose] polymerase 1	0.48
Q01082	Spectrin beta chain, non-erythrocytic 1	0.48
P49327	Fatty acid synthase	0.49
P62750	60S ribosomal protein L23a	0.50
P08579	U2 small nuclear ribonucleoprotein B	0.51
P04792	Heat shock protein beta-1	0.51

P12270	Nucleoprotein TPR	0.51
Q2TAY7	WD40 repeat-containing protein SMU1	0.51
Q15050	Ribosome biogenesis regulatory protein homolog	0.52
P12277	Creatine kinase B-type	0.53
P32119	Peroxiredoxin-2	0.54
P23246	Splicing factor, proline- and glutamine-rich	0.54
Q9BUQ8	Probable ATP-dependent RNA helicase DDX23	0.54
P17066	Heat shock 70 kDa protein 6	0.55
Q92499	ATP-dependent RNA helicase DDX1	0.55
Q9P258	Protein RCC2	0.56
Q9Y224	UPF0568 protein C14orf166	0.56
P13010	X-ray repair cross-complementing protein 5	0.56
P49736	DNA replication licensing factor MCM2	0.56
P80723	Brain acid soluble protein 1	0.56
P38919	Eukaryotic initiation factor 4A-III	0.57
Q12905	Interleukin enhancer-binding factor 2	0.57
Q9NS69	Mitochondrial import receptor subunit TOM22 homolog	0.57
Q15269	Periodic tryptophan protein 2 homolog	0.58
O75533	Splicing factor 3B subunit 1	0.58
Q13907-2	Isoform 2 of Isopentenyl-diphosphate Delta-isomerase 1	0.59
Q08945	FACT complex subunit SSRP1	0.59
Q9GZL7	Ribosome biogenesis protein WDR12	0.59
O60264	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily A member 5	0.602
P62304	Small nuclear ribonucleoprotein E	0.60
Q15397	Pumilio domain-containing protein KIAA0020	0.61
Q8IY81	pre-rRNA processing protein FTSJ3	0.61
O43809	Cleavage and polyadenylation specificity factor subunit 5	0.61
P52907	F-actin-capping protein subunit alpha-1	0.61
Q00839	Heterogeneous nuclear ribonucleoprotein U	0.61
Q08211	ATP-dependent RNA helicase A	0.62

Q7KZF4	Staphylococcal nuclease domain-containing protein 1	0.62
Q9Y3T9	Nucleolar complex protein 2 homolog	0.63
Q14683	Structural maintenance of chromosomes protein 1A	0.63
Q05639	Elongation factor 1-alpha 2	0.64
O75691	Small subunit processome component 20 homolog	0.64
Q8IWA0	WD repeat-containing protein 75	0.64
Q9Y678	Coatomer subunit gamma-1	0.64
Q13151	Heterogeneous nuclear ribonucleoprotein A0	0.65
O15144	Actin-related protein 2/3 complex subunit 2	0.65
P15121	Aldose reductase	0.65
Q96GQ7	Probable ATP-dependent RNA helicase DDX27	0.65
P52292	Importin subunit alpha-2	0.66
P56182	Ribosomal RNA processing protein 1 homolog A	0.66
Q12788	Transducin beta-like protein 3	0.66
P23284	Peptidyl-prolyl cis-trans isomerase B	0.66
O75531	Barrier-to-autointegration factor	0.67
Q9Y2P8	RNA 3'-terminal phosphate cyclase-like protein	0.67
Q9NVP1	ATP-dependent RNA helicase DDX18	0.67
P16083	Ribosyldihydronicotinamide dehydrogenase [quinone]	0.68
P20700	Lamin-B1	0.68
Q9Y5B9	FACT complex subunit SPT16	0.68
Q06203	Amidophosphoribosyltransferase	0.69
O00148	ATP-dependent RNA helicase DDX39A	0.69
O43818	U3 small nucleolar RNA-interacting protein 2	0.69
Q03701	CCAAT/enhancer-binding protein zeta	0.70
Q6P2Q9	Pre-mRNA-processing-splicing factor 8	0.70
P37802	Transgelin-2	0.71
P30740	Leukocyte elastase inhibitor	0.71
P08574	Cytochrome c1, heme protein, mitochondrial	0.72
Q9UQE7	Structural maintenance of chromosomes protein 3	0.72
Q9Y2W1	Thyroid hormone receptor-associated protein 3	0.72

Q14690	Protein RRP5 homolog	0.72
P53004	Biliverdin reductase A	0.72
Q15365	Poly(rC)-binding protein 1	0.72
Q9Y5J1	U3 small nucleolar RNA-associated protein 18 homolog	0.73
P35237	Serpin B6	0.74
P36871	Phosphoglucomutase-1	0.74
Q8TDN6	Ribosome biogenesis protein BRX1 homolog	0.74
O00232	26S proteasome non-ATPase regulatory subunit 12	0.74
P08238	Heat shock protein HSP 90-beta	0.75
E9PBF6	Lamin-B1	0.75
Q15738	Sterol-4-alpha-carboxylate 3-dehydrogenase, decarboxylating	0.75
O60812	Heterogeneous nuclear ribonucleoprotein C-like 1	0.75
P05783	Keratin, type I cytoskeletal 18	0.76
O00567	Nucleolar protein 56	0.77
P04080	Cystatin-B	0.77
Q9Y295	Developmentally-regulated GTP-binding protein 1	0.78
Q92979	Ribosomal RNA small subunit methyltransferase NEP1	0.78
P31949	Protein S100-A11	0.78
Q96DG6	Carboxymethylenebutenolidase homolog	0.78
Q9NV31	U3 small nucleolar ribonucleoprotein protein IMP3	0.78
P05386	60S acidic ribosomal protein P1	0.78
P09382	Galectin-1	0.78
Q86U38	Nucleolar protein 9	0.78
P25815	Protein S100-P	0.79
Q02790	Peptidyl-prolyl cis-trans isomerase FKBP4	0.79
Q9BYZ2	L-lactate dehydrogenase A-like 6B	0.79
P49207	60S ribosomal protein L34	0.79
Q9NYH9	U3 small nucleolar RNA-associated protein 6 homolog	0.79
P22314	Ubiquitin-like modifier-activating enzyme 1	0.81
P26038	Moesin	0.81
P26447	Protein S100-A4	0.81

O43143	Putative pre-mRNA-splicing factor ATP-dependent RNA helicase DHX15	0.81
P48047	ATP synthase subunit O, mitochondrial	0.82
P29317	Ephrin type-A receptor 2	0.82
P31947	14-3-3 protein sigma	0.82
P30086	Phosphatidylethanolamine-binding protein 1	0.82
P34932	Heat shock 70 kDa protein 4	0.83
P58107	Epiplakin	0.83
Q9BZK3	Putative nascent polypeptide-associated complex subunit alpha-like protein	0.83
Q9Y2X3	Nucleolar protein 58	0.83
O60287	Nucleolar pre-ribosomal-associated protein 1	0.83
F5H0T1	Stress-induced-phosphoprotein 1	0.83
P28066	Proteasome subunit alpha type-5	0.84
P28072	Proteasome subunit beta type-6	0.84
P35232	Prohibitin	0.84
P62424	60S ribosomal protein L7a	0.84
P49721	Proteasome subunit beta type-2	0.85
P62854	40S ribosomal protein S26	0.86
P18669	Phosphoglycerate mutase 1	0.86
P00491	Purine nucleoside phosphorylase	0.86
P26373	60S ribosomal protein L13	0.86
P07195	L-lactate dehydrogenase B chain	0.87
P21796	Voltage-dependent anion-selective channel protein 1	0.87
Q01581	Hydroxymethylglutaryl-CoA synthase, cytoplasmic	0.87
Q92621	Nuclear pore complex protein Nup205	0.88
P62081	40S ribosomal protein S7	0.88
Q06830	Peroxiredoxin-1	0.88
E9PCK7	RRP12-like protein	0.89
Q99436	Proteasome subunit beta type-7	0.89
Q99497	Protein DJ-1	0.89
P31153	S-adenosylmethionine synthase isoform type-2	0.89
P06744	Glucose-6-phosphate isomerase	0.90

Q9UL46	Proteasome activator complex subunit 2	0.90
P20618	Proteasome subunit beta type-1	0.90
P30041	Peroxiredoxin-6	0.90
P30050	60S ribosomal protein L12	0.90
P78527	DNA-dependent protein kinase catalytic subunit	0.90
Q9NV06	DDB1- and CUL4-associated factor 13	0.90
Q9Y230	RuvB-like 2	0.90
P06703	Protein S100-A6	0.91
P25705	ATP synthase subunit alpha, mitochondrial	0.91
P49257	Protein ERGIC-53	0.91
A6NDG6	Phosphoglycolate phosphatase	0.91
P61586	Transforming protein RhoA	0.91
P62263	40S ribosomal protein S14	0.91
Q562R1	Beta-actin-like protein 2	0.91
P23921	Ribonucleoside-diphosphate reductase large subunit	0.92
P51571	Translocon-associated protein subunit delta	0.92
P04406	Glyceraldehyde-3-phosphate dehydrogenase	0.92
P42166	Lamina-associated polypeptide 2, isoform alpha	0.92
P62277	40S ribosomal protein S13	0.92
P06733	Alpha-enolase	0.92
P42766	60S ribosomal protein L35	0.92
O00299	Chloride intracellular channel protein 1	0.92
O95336	6-phosphogluconolactonase	0.92
P07737	Profilin-1	0.92
P13639	Elongation factor 2	0.92
O75131	Copine-3	0.93
P08754	Guanine nucleotide-binding protein G(k) subunit alpha	0.93
P47914	60S ribosomal protein L29	0.93
P08708	40S ribosomal protein S17	0.93
P25787	Proteasome subunit alpha type-2	0.93
P30084	Enoyl-CoA hydratase, mitochondrial	0.93

P0CG39	POTE ankyrin domain family member J	0.94
P35268	60S ribosomal protein L22	0.94
P41091	Eukaryotic translation initiation factor 2 subunit 3	0.94
Q01813	6-phosphofructokinase type C	0.94
Q8N726	Cyclin-dependent kinase inhibitor 2A, isoform 4	0.94
P18124	60S ribosomal protein L7	0.94
P25398	40S ribosomal protein S12	0.94
Q9H9B4	Sideroflexin-1	0.94
P46940	Ras GTPase-activating-like protein IQGAP1	0.95
Q9BQ39	ATP-dependent RNA helicase DDX50	0.95
P24534	Elongation factor 1-beta	0.95
P12004	Proliferating cell nuclear antigen	0.96
Q16719	Kynureninase	0.96
P52597	Heterogeneous nuclear ribonucleoprotein F	0.96
P62269	40S ribosomal protein S18	0.96
P61254	60S ribosomal protein L26	0.96
Q14019	Coactosin-like protein	0.96
F5H1L6	Serine/threonine-protein phosphatase PP1-alpha catalytic subunit (Fragment)	0.97
P16152	Carbonyl reductase [NADPH] 1	0.97
P46777	60S ribosomal protein L5	0.97
Q15181	Inorganic pyrophosphatase	0.97
P61313	60S ribosomal protein L15	0.98
Q9HAV0	Guanine nucleotide-binding protein subunit beta-4	0.99
P51153	Ras-related protein Rab-13	0.99
O75489	NADH dehydrogenase [ubiquinone] iron-sulfur protein 3, mitochondrial	0.99
I3L4N8	Actin, cytoplasmic 2 (Fragment)	0.99
P00367	Glutamate dehydrogenase 1, mitochondrial	0.99
Q9Y3U8	60S ribosomal protein L36	0.99
P62249	40S ribosomal protein S16	0.99
E7ES52	Cyclin-dependent kinase inhibitor 1B	1.00
P21266	Glutathione S-transferase Mu 3	1.00

P60903	Protein S100-A10	1.00
Q96AG4	Leucine-rich repeat-containing protein 59	1.00
Q8TD16-2	Isoform 2 of Protein bicaudal D homolog 2	1.00
P00441	Superoxide dismutase [Cu-Zn]	1.01
P62280	40S ribosomal protein S11	1.01
P62266	40S ribosomal protein S23	1.01
Q9UBI6	Guanine nucleotide-binding protein G(I)/G(S)/G(O) subunit gamma-12	1.01
P46782	40S ribosomal protein S5	1.02
P55072	Transitional endoplasmic reticulum ATPase	1.02
P15311	Ezrin	1.02
P53985	Monocarboxylate transporter 1	1.02
P53999	Activated RNA polymerase II transcriptional coactivator p15	1.02
P62701	40S ribosomal protein S4, X isoform	1.02
P23458	Tyrosine-protein kinase JAK1	1.03
Q92616	Translational activator GCN1	1.03
P61353	60S ribosomal protein L27	1.03
P62906	60S ribosomal protein L10a	1.03
P31689	DnaJ homolog subfamily A member 1	1.03
P27348	14-3-3 protein theta	1.04
P30041	Peroxiredoxin-6	1.04
P23526	Adenosylhomocysteinase	1.04
P50914	60S ribosomal protein L14	1.04
P14625	Endoplasmin	1.04
P62841	40S ribosomal protein S15	1.04
Q9NR45	Sialic acid synthase	1.04
Q969H8	UPF0556 protein C19orf10	1.05
P28070	Proteasome subunit beta type-4	1.05
P43121	Cell surface glycoprotein MUC18	1.05
Q969Q0	60S ribosomal protein L36a-like	1.05
P35579	Myosin-9	1.05
O76003	Glutaredoxin-3	1.06

P55795	Heterogeneous nuclear ribonucleoprotein H2	1.06
P61006	Ras-related protein Rab-8A	1.07
O00487	26S proteasome non-ATPase regulatory subunit 14	1.07
O43707	Alpha-actinin-4	1.07
Q99714	3-hydroxyacyl-CoA dehydrogenase type-2	1.08
O75643	U5 small nuclear ribonucleoprotein 200 kDa helicase	1.08
P46778	60S ribosomal protein L21	1.08
Q04917	14-3-3 protein eta	1.08
P40429	60S ribosomal protein L13a	1.09
Q12907	Vesicular integral-membrane protein VIP36	1.09
Q15006	ER membrane protein complex subunit 2	1.09
P68371	Tubulin beta-4B chain	1.10
Q9H3N1	Thioredoxin-related transmembrane protein 1	1.10
H0YKF0	Electron transfer flavoprotein subunit alpha, mitochondrial (Fragment)	1.11
P37837	Transaldolase	1.11
P07814	Bifunctional glutamate/proline--tRNA ligase	1.11
P05198	Eukaryotic translation initiation factor 2 subunit 1	1.11
Q01105	Protein SET	1.12
P62805	Histone H4	1.12
Q9UMS4	Pre-mRNA-processing factor 19	1.12
P05556	Integrin beta-1	1.12
P22087	rRNA 2'-O-methyltransferase fibrillarin	1.13
Q16795	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 9, mitochondrial	1.14
P19338	Nucleolin	1.14
Q9H4A6	Golgi phosphoprotein 3	1.14
P04083	Annexin A1	1.15
Q9Y5M8	Signal recognition particle receptor subunit beta	1.15
P55809	Succinyl-CoA:3-ketoacid coenzyme A transferase 1, mitochondrial	1.15
P84243	Histone H3.3	1.15
Q13641	Trophoblast glycoprotein	1.16
P11166	Solute carrier family 2, facilitated glucose transporter member 1	1.16

P02792	Ferritin light chain	1.16
Q14764	Major vault protein	1.17
P48637	Glutathione synthetase	1.17
P30040	Endoplasmic reticulum resident protein 29	1.188
Q10589	Bone marrow stromal antigen 2	1.19
O96008	Mitochondrial import receptor subunit TOM40 homolog	1.19
P31930	Cytochrome b-c1 complex subunit 1, mitochondrial	1.19
O75874	Isocitrate dehydrogenase [NADP] cytoplasmic	1.19
P54920	Alpha-soluble NSF attachment protein	1.19
Q71DI3	Histone H3.2	1.20
P00505	Aspartate aminotransferase, mitochondrial	1.20
P60842	Eukaryotic initiation factor 4A-I	1.21
P50148	Guanine nucleotide-binding protein G(q) subunit alpha	1.22
P00966	Argininosuccinate synthase	1.22
P04843	Dolichyl-diphosphooligosaccharide--protein glycosyltransferase subunit 1	1.23
Q96QK1	Vacuolar protein sorting-associated protein 35	1.24
O14980	Exportin-1	1.24
Q9BVK6	Transmembrane emp24 domain-containing protein 9	1.24
Q13011	Delta(3,5)-Delta(2,4)-dienoyl-CoA isomerase, mitochondrial	1.25
P27797	Calreticulin	1.26
Q01650	Large neutral amino acids transporter small subunit 1	1.26
H7BZJ3	Thioredoxin (Fragment)	1.28
P12236	ADP/ATP translocase 3	1.28
P00492	Hypoxanthine-guanine phosphoribosyltransferase	1.29
P30043	Flavin reductase (NADPH)	1.29
O95373	Importin-7	1.31
O60568	Procollagen-lysine,2-oxoglutarate 5-dioxygenase 3	1.32
P62745	Rho-related GTP-binding protein RhoB	1.34
Q07065	Cytoskeleton-associated protein 4	1.34
P10599	Thioredoxin	1.35
P40261	Nicotinamide N-methyltransferase	1.35

Q16740	Putative ATP-dependent Clp protease proteolytic subunit, mitochondrial	1.36
O95573	Long-chain-fatty-acid--CoA ligase 3	1.37
Q96HE7	ERO1-like protein alpha	1.37
P48556	26S proteasome non-ATPase regulatory subunit 8	1.38
P01891	HLA class I histocompatibility antigen, A-68 alpha chain	1.38
P61981	14-3-3 protein gamma	1.39
P67936	Tropomyosin alpha-4 chain	1.40
P61106	Ras-related protein Rab-14	1.41
O43681	ATPase ASNA1	1.42
O75396	Vesicle-trafficking protein SEC22b	1.42
H7C3T4	Peroxiredoxin-4 (Fragment)	1.44
P05141	ADP/ATP translocase 2	1.44
Q04837	Single-stranded DNA-binding protein, mitochondrial	1.47
Q9UHV9	Prefoldin subunit 2	1.53
P13667	Protein disulfide-isomerase A4	1.55
Q6UB35	Monofunctional C1-tetrahydrofolate synthase, mitochondrial	1.60
Q8NFH3	Nucleoporin Nup43	1.60
Q15645	Pachytene checkpoint protein 2 homolog	1.62
Q8IV08	Phospholipase D3	1.62
P24752	Acetyl-CoA acetyltransferase, mitochondrial	1.64
P05161	Ubiquitin-like protein ISG15	1.66
Q14566	DNA replication licensing factor MCM6	1.71
P05362	Intercellular adhesion molecule 1	1.72
O15173	Membrane-associated progesterone receptor component 2	1.78
Q8TEM1	Nuclear pore membrane glycoprotein 210	1.81
P21266	Glutathione S-transferase Mu 3	1.84
P61026	Ras-related protein Rab-10	1.87
P49755	Transmembrane emp24 domain-containing protein 10	1.88
P11021	78 kDa glucose-regulated protein	1.97
P49411	Elongation factor Tu, mitochondrial	2.00
P41250	Glycine--tRNA ligase	2.17

P42704	Leucine-rich PPR motif-containing protein, mitochondrial	2.27
Q15758	Neutral amino acid transporter B(0)	2.32
P24539	ATP synthase subunit b, mitochondrial	2.48
P40939	Trifunctional enzyme subunit alpha, mitochondrial	2.50
Q07021	Complement component 1 Q subcomponent-binding protein, mitochondrial	2.52
O43175	D-3-phosphoglycerate dehydrogenase	2.52=3
P10809	60 kDa heat shock protein, mitochondrial	2.67
Q9Y617	Phosphoserine aminotransferase	2.87]
P49588	Alanine--tRNA ligase, cytoplasmic	2.88]
Q14204	Cytoplasmic dynein 1 heavy chain 1	3.04]
P38646	Stress-70 protein, mitochondrial	3.48]
E9PPU0	Epiplakin	4.29

*：Heavy/Light means the protein expression ratio of PI4KII α and EGFR dual inhibited MCF-7 cells to Control cells.