

## E6E7\_pLC Function Hierarchy

Function Hierarchy			
B.1.0.0.0 Signal transduction and regulation			
B.1.1.0.0 Extracellular messengers			
B.1.1.1.0 Hormones and Pheromones			
	N30625	cortistatin	3.88
	U25997	stanniocalcin 1	2.17
	XM_004381	vasoactive intestinal peptide	1.96
	J03802	parathyroid hormone-like hormone	-2.75
	AI591151	parathyroid hormone-like hormone	-2.16
	K02054	gastrin-releasing peptide	-1.61
	AW043690	cholecystokinin	-1.52
B.1.1.2.0 Growth factors			
	U94319	PSIP2 PC4 and SFRS1 interacting protein 2	5.66
	M57399	pleiotrophin (heparin binding growth factor 8, neurite growth-pro	4.69
	X55110	midkine (neurite growth-promoting factor 2)	2.74
	M57399	pleiotrophin (heparin binding growth factor 8, neurite growth-pro	2.63
	AF024710	vascular endothelial growth factor	2.44
	AF022375	vascular endothelial growth factor	2.16
	X02812	transforming growth factor, beta 1 (Camurati-Engelmann diseas	1.89
	X03656	colony stimulating factor 3 (granulocyte)	1.76
	AF063020	PC4 and SFRS1 interacting protein 2	1.11
	M63193	endothelial cell growth factor 1 (platelet-derived)	-6.56
	X06374	platelet-derived growth factor alpha polypeptide	-3.15
	M22488	bone morphogenetic protein 1	-2.68
	L36033	stromal cell-derived factor 1	-2.03
	M96956	teratocarcinoma-derived growth factor 1	-1.66
	X00173	insulin-like growth factor 1 (somatomedin C)	-1.62
	AF100780	WNT1 inducible signaling pathway protein 2	-1.61
	K02054	gastrin-releasing peptide	-1.61
	D14838	fibroblast growth factor 9 (glia-activating factor)	-1.40
	M22490	bone morphogenetic protein 4	-1.29
B.1.1.3.0 Neuropeptides			
	X76029	neuromedin U	2.13
	K02054	gastrin-releasing peptide	-1.61
B.1.1.4.0 Vasomediators			
	XM_004381	vasoactive intestinal peptide	1.96
B.1.1.5.0 Cytokines			
B.1.1.5.1 Chemokines			
	AA398174	lysozyme homolog	-2.31
	Y13710	chemokine (C-C motif) ligand 18 (pulmonary and activation-reg	-2.23
	U46573	chemokine (C-C motif) ligand 11	-2.04
	L36033	stromal cell-derived factor 1	-2.03
	U64197	chemokine (C-C motif) ligand 20	-1.37
B.1.1.5.99 Other cytokines			
	L08096	tumor necrosis factor (ligand) superfamily, member 7	2.87
	X03656	colony stimulating factor 3 (granulocyte)	1.76
	J00207	interferon, alpha 2	1.30
	M22488	bone morphogenetic protein 1	-2.68
	AI819249	cytokine receptor-like factor 1	-2.50
	AF059293	cytokine receptor-like factor 1	-1.88
	X04688	interleukin 5 (colony-stimulating factor, eosinophil)	-1.34
	M22490	bone morphogenetic protein 4	-1.29
B.1.1.99.0 Other extracellular messengers			
	X59770	interleukin 1 receptor, type II	2.14
B.1.2.0.0 Receptors			

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	B.1.2.1.0 Receptor protein kinases		
	B.1.2.1.1 Receptor serine/threonine kinases		
	Z22533	activin A receptor type II-like 1	-1.82
	B.1.2.1.2 Receptor tyrosine kinases		
	L06139	TEK tyrosine kinase, endothelial (venous malformations, multip	1.83
	D16105	leukocyte tyrosine kinase	-3.96
	X03363	v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neu	-3.74
	D83492	EphB6	-2.98
	M80634	fibroblast growth factor receptor 2 (bacteria-expressed kinase, k	-2.17
	X76079	platelet-derived growth factor receptor, alpha polypeptide	-2.01
	X75208	EphB3	-1.90
	S61953	v-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avia	-1.38
	B.1.2.2.0 Seven transmembrane/G protein-coupled receptors		
	U17418	parathyroid hormone receptor 1	4.55
	AL552324	prostaglandin I2 (prostacyclin) receptor (IP)	4.28
	Y12505	5-hydroxytryptamine (serotonin) receptor 4	3.32
	X68149	Burkitt lymphoma receptor 1, GTP binding protein	3.00
	AF095448	retinoic acid induced 3	1.45
	XM_009380	olfactory receptor, family 10, subfamily H, member 3	1.44
	D13305	cholecystokinin B receptor	-3.58
	L22206	arginine vasopressin receptor 2 (nephrogenic diabetes insipidus)	-3.40
	Z94155	G protein-coupled receptor 17	-3.02
	U17579	growth hormone releasing hormone receptor	-3.02
	X51362	dopamine receptor D2	-2.84
	U31216	glutamate receptor, metabotropic 1	-2.63
	AJ302576	olfactory receptor, family 2, subfamily J, member 2	-2.34
	U03642	angiotensin receptor-like 1	-2.05
	U34038	coagulation factor II (thrombin) receptor-like 1	-1.89
	U66579	G protein-coupled receptor 20	-1.88
	AF034633	G protein-coupled receptor 39	-1.70
	AF056085	G protein-coupled receptor 51	-1.41
	M62424	coagulation factor II (thrombin) receptor	-1.35
	B.1.2.3.0 Ligand-gated ion channels		
	U16126	glutamate receptor, ionotropic, kainate 2	3.71
	U62437	cholinergic receptor, nicotinic, beta polypeptide 2 (neuronal)	3.34
	D26070	inositol 1,4,5-triphosphate receptor, type 1	3.04
	D26070	inositol 1,4,5-triphosphate receptor, type 1	2.91
	S82769	gamma-aminobutyric acid (GABA) A receptor, gamma 3	1.60
	B.1.2.4.0 Nuclear receptors		
	X16155	nuclear receptor subfamily 2, group F, member 1	2.83
	M29960	nuclear receptor subfamily 2, group C, member 1	2.49
	M29960	nuclear receptor subfamily 2, group C, member 1	2.12
	X51417	estrogen-related receptor beta	1.99
	S67777	Estrogen receptor (exon 6) [human, tamoxifen-resistant breast t	1.53
	L12060	retinoic acid receptor, gamma	-3.75
	U07132	nuclear receptor subfamily 1, group H, member 2	-2.98
	Z49825	hepatocyte nuclear factor 4, alpha	-2.36
	L13740	nuclear receptor subfamily 4, group A, member 1	-2.24
	U76388	nuclear receptor subfamily 5, group A, member 1	-2.20
	M24900	nuclear receptor subfamily 1, group D, member 1	-2.15
	X89894	nuclear receptor subfamily 4, group A, member 3	-1.51
	S71020	ESTs	-1.22
	B.1.2.99.0 Other receptors		
	AF032862	hyaluronan-mediated motility receptor (RHAMM)	5.78
	AI813532	tumor necrosis factor receptor superfamily, member 1B	3.76

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			AF020202	unc-13-like ( <i>C. elegans</i> )	2.80
			J04162	Fc fragment of IgG, low affinity IIIb, receptor for (CD16)	1.94
			X02160	insulin receptor	1.87
			J03171	interferon (alpha, beta and omega) receptor 1	1.80
			X63717	tumor necrosis factor receptor superfamily, member 6	1.75
			H10776	chromobox homolog 6	1.70
			H10776	chromobox homolog 6	1.70
			H10776	chromobox homolog 6	1.70
			M61906	phosphoinositide-3-kinase, regulatory subunit, polypeptide 1 (p85α)	1.56
			X58288	protein tyrosine phosphatase, receptor type, M	1.50
			X58288	protein tyrosine phosphatase, receptor type, M	1.30
			AF002700	GDNF family receptor alpha 2	1.30
			AE000659	T-cell receptor alpha delta locus from bases 250472 to 501670	-4.11
			AV650258	interleukin 10 receptor, beta	-3.05
			AF068868	tumor necrosis factor receptor superfamily, member 21	-2.78
			AB014558	cryptochrome 2 (photolyase-like)	-2.63
			U79528	sigma receptor (SR31747 binding protein 1)	-2.43
			M31932	Fc fragment of IgG, low affinity IIa, receptor for (CD32)	-2.38
			L13436	natriuretic peptide receptor B/guanylate cyclase B (atrionatriuretic factor)	-2.27
			X57282	erythropoietin receptor	-2.11
			L13210	lectin, galactoside-binding, soluble, 3 binding protein	-1.90
			AI687306	cargo selection protein (mannose 6 phosphate receptor binding protein)	-1.32
			U17033	phospholipase A2 receptor 1, 180kD	-1.30
			U88879	toll-like receptor 3	-1.20
			AF025533	leukocyte immunoglobulin-like receptor, subfamily B (with TM alpha)	-1.11
			AF025529	leukocyte immunoglobulin-like receptor, subfamily A (with TM delta)	-1.11
	B.1.3.0.0	Intracellular signaling			
		B.1.3.1.0	Protein phosphorylation		
			B.1.3.1.1	Serine/threonine kinases	
			M68520	cyclin-dependent kinase 2	8.30
			U89896	casein kinase 1, gamma 2	7.63
			AA203487	STK17B Serine/threonine kinase 17b (apoptosis-inducing)	6.57
			U26424	serine/threonine kinase 3 (STE20 homolog, yeast)	4.53
			M86699	TTK protein kinase	4.42
			AF011468	serine/threonine kinase 15	4.32
			D88357	cell division cycle 2, G1 to S and G2 to M	4.07
			AL022328	mitogen-activated protein kinase 11	3.71
			M68520	cyclin-dependent kinase 2	3.32
			X05360	cell division cycle 2, G1 to S and G2 to M	3.26
			U09759	mitogen-activated protein kinase 9	2.96
			L29217	CDC-like kinase 3	2.91
			L29219	CDC-like kinase 1	2.87
			U09759	mitogen-activated protein kinase 9	2.82
			D86959	Ste20-related serine/threonine kinase	2.73
			U67156	mitogen-activated protein kinase kinase kinase 5	2.70
			AB003698	CDC7 cell division cycle 7-like 1 ( <i>S. cerevisiae</i> )	2.52
			D79997	maternal embryonic leucine zipper kinase	2.50
			D43636	SNF-1 related kinase	2.40
			U25265	mitogen-activated protein kinase kinase 5	2.39
			U47077	protein kinase, DNA-activated, catalytic polypeptide	2.23
			AB000449	vaccinia related kinase 1	2.18
			AF002715	mitogen-activated protein kinase kinase kinase 4	2.11
			AF032437	mitogen-activated protein kinase-activated protein kinase 5	1.99
			AF009225	conserved helix-loop-helix ubiquitous kinase	1.90
			X54942	CDC28 protein kinase 2	1.89

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			U34994	protein kinase, DNA-activated, catalytic polypeptide	1.85
			AL031282	cell division cycle 2-like 2	1.81
			Z29066	NIMA (never in mitosis gene a)-related kinase 2	1.51
			X59727	mitogen-activated protein kinase 4	1.16
			AB023166	citron (rho-interacting, serine/threonine kinase 21)	1.16
			X99325	serine/threonine kinase 25 (STE20 homolog, yeast)	-2.90
			X66363	PCTAIRE protein kinase 1	-2.57
			X66363	PCTAIRE protein kinase 1	-2.31
			AI991631	bromodomain-containing 4	-2.30
			D10495	protein kinase C, delta	-2.05
			AI767675	chymotrypsin-like	-1.96
			U43784	mitogen-activated protein kinase-activated protein kinase 3	-1.95
			AF004709	mitogen-activated protein kinase 13	-1.94
			AC002073	LIM domain kinase 2	-1.90
			M63167	v-akt murine thymoma viral oncogene homolog 1	-1.89
			L36719	mitogen-activated protein kinase kinase 3	-1.83
			Z22533	activin A receptor type II-like 1	-1.82
			X52479	protein kinase C, alpha	-1.72
			W27723	cell division cycle 2-like 5 (cholinesterase-related cell division c	-1.53
			X66358	cyclin-dependent kinase-like 1 (CDC2-related kinase)	-1.49
			M77198	v-akt murine thymoma viral oncogene homolog 2	-1.35
			U59305	Ser-Thr protein kinase related to the myotonic dystrophy protein	-1.35
			NM_005734	homeodomain interacting protein kinase 3	-1.15
			AJ224538	protein kinase, AMP-activated, beta 2 non-catalytic subunit	-1.15
			U33052	protein kinase C-like 2	-1.09
	B.1.3.1.2 Serine/threonine phosphatases				
			D13640	partner of PIX 2	2.73
			L07590	protein phosphatase 2 (formerly 2A), regulatory subunit B" (PR	2.21
			L42374	protein phosphatase 2, regulatory subunit B (B56), beta isoform	-3.68
			Y18206	protein phosphatase 1, regulatory subunit 3D	-2.88
			AB013382	dual specificity phosphatase 6	-2.06
			L05147	dual specificity phosphatase 3 (vaccinia virus phosphatase VH1	-1.79
			U48807	dual specificity phosphatase 4	-1.26
			L14778	protein phosphatase 3 (formerly 2B), catalytic subunit, alpha iso	-1.26
	B.1.3.1.3 Tyrosine kinases				
			M86699	TTK protein kinase	4.42
			X62048	WEE1+ homolog (S. pombe)	2.91
			L29217	CDC-like kinase 3	2.91
			BE622583	galactosidase, alpha	2.89
			L29219	CDC-like kinase 1	2.87
			U25265	mitogen-activated protein kinase kinase 5	2.39
			L06139	TEK tyrosine kinase, endothelial (venous malformations, multip	1.83
			U31601	Janus kinase 3 (a protein tyrosine kinase, leukocyte)	1.73
			BF529712	breakpoint cluster region	-4.54
			D16105	leukocyte tyrosine kinase	-3.96
			X03363	v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neu	-3.74
			D83492	EphB6	-2.98
			M25269	ELK1, member of ETS oncogene family	-2.46
			XM_012998	breakpoint cluster region	-2.18
			M80634	fibroblast growth factor receptor 2 (bacteria-expressed kinase, K	-2.17
			X76079	platelet-derived growth factor receptor, alpha polypeptide	-2.01
			X75208	EphB3	-1.90
			U02680	protein tyrosine kinase 9	-1.89
			L36719	mitogen-activated protein kinase kinase 3	-1.83
			X02596	breakpoint cluster region	-1.45

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		M14752	v-abl Abelson murine leukemia viral oncogene homolog 1	-1.44
		S61953	v-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)	-1.38
		AF077754	v-src sarcoma (Schmidt-Ruppin A-2) viral oncogene homolog (avian)	-1.34
	B.1.3.1.4	Tyrosine phosphatases		
		AF051160	protein tyrosine phosphatase type IVA, member 1	6.28
		M64572	protein tyrosine phosphatase, non-receptor type 3	4.82
		U27193	dual specificity phosphatase 8	3.64
		AI828880	protein tyrosine phosphatase, non-receptor type 2	2.58
		X62055	protein tyrosine phosphatase, non-receptor type 6	2.26
		AB028996	myotubularin related protein 2	1.76
		X58288	protein tyrosine phosphatase, receptor type, M	1.50
		X58288	protein tyrosine phosphatase, receptor type, M	1.30
		AB013382	dual specificity phosphatase 6	-2.06
		L05147	dual specificity phosphatase 3 (vaccinia virus phosphatase VH1)	-1.79
		U48807	dual specificity phosphatase 4	-1.26
		AF073482	myotubularin related protein 7	-1.12
	B.1.3.1.6	Protein kinase regulators		
		U26727	cyclin-dependent kinase inhibitor 2A (melanoma, p16, inhibits Cdk4)	5.35
		L25876	cyclin-dependent kinase inhibitor 3 (CDK2-associated dual specific)	5.33
		AI304854	cyclin-dependent kinase inhibitor 1B (p27, Kip1)	2.83
		U28964	tyrosine 3-monooxygenase/triptophan 5-monooxygenase activator	-3.74
		X80343	cyclin-dependent kinase 5, regulatory subunit 1 (p35)	-2.46
	B.1.3.2.0	Phospholipid and inositol-phosphate signaling		
	B.1.3.2.1	Phospholipases		
		U09117	phospholipase C, delta 1	-3.66
		U60644	similar to vaccinia virus HindIII K4L ORF	-2.52
		M81780	sphingomyelin phosphodiesterase 1, acid lysosomal (acid sphingomyelinase)	-2.24
		Z16411	phospholipase C, beta 3 (phosphatidylinositol-specific)	-2.09
	B.1.3.2.2	Phospholipid and inositol kinases		
		L36151	hypothetical protein MGC14697	1.72
		X80907	phosphoinositide-3-kinase, regulatory subunit, polypeptide 2 (p85)	-2.51
		AL046940	hypothetical protein MGC2747	-1.95
	B.1.3.2.3	Phospholipid and inositol phosphatases		
		U96919	inositol polyphosphate-4-phosphatase, type I, 107kD	-4.87
		U45973	skeletal muscle and kidney enriched inositol phosphatase	-1.87
	B.1.3.3.0	Cyclic nucleotide signaling		
	B.1.3.3.1	Adenylate cyclases		
		AB011083	adenylate cyclase 3	1.92
	B.1.3.3.2	Guanylate cyclases		
		L13436	natriuretic peptide receptor B/guanylate cyclase B (atrionatriuretic factor)	-2.27
	B.1.3.3.4	3',5'-cyclic-nucleotide phosphodiesterases		
		AF079529	phosphodiesterase 8B	1.68
		U02882	phosphodiesterase 4D, cAMP-specific (phosphodiesterase E3 domain)	-1.26
	B.1.3.4.0	G protein signaling		
	B.1.3.4.1	Heterotrimeric G proteins		
		AA149637	transducin (beta)-like 1	1.39
		U02609	transducin (beta)-like 3	-1.91
	B.1.3.4.2	Ras-related small G proteins		
		X91504	ADP-ribosylation factor related protein 1	6.63
		AF012086	RAN binding protein 2-like 1	2.59
		X79781	RAB35, member RAS oncogene family	2.52
		M57763	ADP-ribosylation factor 6	2.37
		L25080	ras homolog gene family, member A	1.82
		X12534	RAP2A, member of RAS oncogene family	1.12
		U18420	RAB5C, member RAS oncogene family	-3.31

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		Z95624	SOCS box containing protein RAR2A	-2.21
		M29870	ras-related C3 botulinum toxin substrate 1 (rho family, small GTPase)	-2.14
		J00277	v-Ha-ras Harvey rat sarcoma viral oncogene homolog	-2.02
		M28215	RAB5A, member RAS oncogene family	-1.96
		BE268682	related RAS viral (r-ras) oncogene homolog	-1.94
		AI189226	RAB31, member RAS oncogene family	-1.91
		BG054807	Ras suppressor protein 1	-1.88
		U57093	RAB27B, member RAS oncogene family	-1.76
		AA461365	RAB4B, member RAS oncogene family	-1.70
		W28546	ADP-ribosylation factor-like 3	-1.40
		D14889	RAB33A, member RAS oncogene family	-1.33
	B.1.3.4.3 GTPase activating proteins			
		AC004084	Ca2+-promoted Ras inactivator	4.79
		U51903	IQ motif containing GTPase activating protein 2	-2.39
		AI818303	nth endonuclease III-like 1 (E. coli)	-2.24
		AL022238	megakaryoblastic leukemia (translocation) 1	-1.92
	B.1.3.4.4 Guanine nucleotide exchange factors			
		AB014551	rho/rac guanine nucleotide exchange factor (GEF) 2	2.85
		U74324	RAB interacting factor	2.07
		BF529712	breakpoint cluster region	-4.54
		XM_012998	breakpoint cluster region	-2.18
		X02596	breakpoint cluster region	-1.45
		AB002378	Rho guanine nucleotide exchange factor (GEF) 11	-1.41
		AB020722	Rho guanine nucleotide exchange factor (GEF) 15	-1.32
	B.1.3.4.5 GDP dissociation inhibitors			
		X69550	Rho GDP dissociation inhibitor (GDI) alpha	-3.24
	B.1.3.5.0 Calcium signal modulators			
	B.1.3.5.2 Calmodulins			
		AW502357	LAG1 longevity assurance homolog 2 (S. cerevisiae)	-2.21
	B.1.3.6.0 Cyclins			
		AF091433	cyclin E2	12.82
		M74093	cyclin E1	8.34
		AL080146	cyclin B2	5.89
		M25753	cyclin B1	4.80
		M25753	cyclin B1	3.88
		M73812	cyclin E1	2.88
		X51688	cyclin A2	1.97
	B.1.3.7.0 Signal complex scaffolding proteins			
		H13301	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, Y3 monooxygenase	2.06
		U28964	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, Y3 monooxygenase	-3.74
		S62539	insulin receptor substrate 1	-1.31
	B.1.4.0.0 Transcription factors			
	B.1.4.1.0 DNA binding transcription factors			
	B.1.4.1.1 Helix-turn-helix/homeodomain			
		AF023203	homeobox protein Ogl12 (OGL12) mRNA, partial cds	6.58
		U73328	distal-less homeobox 4	4.64
		U43189	E74-like factor 2 (ets domain transcription factor)	3.90
		D12765	ets variant gene 4 (E1A enhancer binding protein, E1AF)	3.17
		D26362	bromodomain containing 3	2.91
		U74612	forkhead box M1	2.59
		X16666	homeo box B1	2.37
		M65217	heat shock transcription factor 2	2.34
		AF038177	FOXJ2 forkhead factor	2.29
		U11732	ets variant gene 6 (TEL oncogene)	1.28
		X17360	homeo box D4	-2.75

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		M25269	ELK1, member of ETS oncogene family	-2.46
		Z49995	homeo box D1	-2.06
		AB008913	paired box gene 4	-1.89
		M16938	homeo box C6	-1.86
		AF017418	Meis1, myeloid ecotropic viral integration site 1 homolog 2 (mouse)	-1.74
		NM_014360	NK-2 (Drosophila) homolog 8	-1.69
		AI885749	homeo box A10	-1.38
	B.1.4.1.2	Helix-loop-helix		
		S75174	E2F transcription factor 4, p107/p130-binding	11.44
		L23959	transcription factor Dp-1	4.25
		W28479	transcription factor Dp-1	4.14
		D38550	E2F transcription factor 3	2.65
		AF041381	E2F transcription factor 6	2.36
		AF044288	aryl hydrocarbon receptor nuclear translocator-like	2.10
		L23959	transcription factor Dp-1	1.79
		AF040963	Mad4 homolog	1.61
		AI793265	achaete-scute complex-like 1 (Drosophila)	-2.59
		S75174	E2F transcription factor 4, p107/p130-binding	-2.50
	B.1.4.1.3	Leucine zipper		
		S75174	E2F transcription factor 4, p107/p130-binding	11.44
		L23959	transcription factor Dp-1	4.25
		W28479	transcription factor Dp-1	4.14
		AI635895	delta sleep inducing peptide, immunoreactor	2.82
		D38550	E2F transcription factor 3	2.65
		AF041381	E2F transcription factor 6	2.36
		M95925	neural retina leucine zipper	2.05
		AB002803	BTB and CNC homology 1, basic leucine zipper transcription factor	1.89
		L23959	transcription factor Dp-1	1.79
		S68134	Homo sapiens, Similar to cAMP responsive element modulator,	1.74
		AF040963	Mad4 homolog	1.61
		AF016898	basic leucine zipper transcription factor, ATF-like	1.08
		M29039	jun B proto-oncogene	-8.15
		U72882	interferon-induced protein 35	-3.57
		L49169	FBJ murine osteosarcoma viral oncogene homolog B	-2.57
		S75174	E2F transcription factor 4, p107/p130-binding	-2.50
		U16028	activating transcription factor 2	-2.08
		AJ133115	TSC-22-like	-1.84
		S68134	Homo sapiens, Similar to cAMP responsive element modulator,	-1.77
	B.1.4.1.4	Zinc-coordinating		
		M77810	hypothetical protein MGC2306	5.56
		L11672	zinc finger protein 91 (HPF7, HTF10)	4.28
		M91585	bromodomain and PHD finger containing, 1	3.70
		D21063	MCM2 minichromosome maintenance deficient 2, mitotin (S. cerevisiae)	3.18
		L04282	zinc finger protein 148 (pHZ-52)	3.04
		AA478904	Kruppel-like factor 7 (ubiquitous)	3.01
		X16155	nuclear receptor subfamily 2, group F, member 1	2.83
		M29960	nuclear receptor subfamily 2, group C, member 1	2.49
		U38904	zinc finger protein 211	2.41
		L11672	zinc finger protein 91 (HPF7, HTF10)	2.27
		U78722	zinc finger protein 165	2.26
		M29960	nuclear receptor subfamily 2, group C, member 1	2.12
		M29580	zinc finger protein 7 (KOX 4, clone HF.16)	2.08
		AF054180	zinc finger protein 254	2.07
		X51417	estrogen-related receptor beta	1.99
		U25435	CCCTC-binding factor (zinc finger protein)	1.95

## E6E7\_pLC Function Hierarchy

		AJ007042	Wolf-Hirschhorn syndrome candidate 1	1.88
		J04076	early growth response 2 (Krox-20 homolog, Drosophila)	1.83
		D79983	likely ortholog of mouse ubiquitin conjugating enzyme 7 interact	1.76
		M81601	transcription elongation factor A (SII), 1	1.75
		AF060503	zinc finger protein	1.73
		L04282	zinc finger protein 148 (pHZ-52)	1.66
		S67777	Estrogen receptor {exon 6} [human, tamoxifen-resistant breast t	1.53
		AL080125	zinc finger protein 20 (KOX 13)	1.48
		AB007872	zinc finger protein 264	1.47
		U38480	retinoid X receptor, gamma	1.43
		U71598	zinc finger protein 274	1.28
		M93119	insulinoma-associated 1	1.18
		L12060	retinoic acid receptor, gamma	-3.75
		U07132	nuclear receptor subfamily 1, group H, member 2	-2.98
		M68891	hypothetical protein MGC2306	-2.57
		AI991531	TGFB inducible early growth response 2	-2.55
		Z49825	hepatocyte nuclear factor 4, alpha	-2.36
		X16576	zinc finger protein 46 (KUP)	-2.28
		L13740	nuclear receptor subfamily 4, group A, member 1	-2.24
		U76388	nuclear receptor subfamily 5, group A, member 1	-2.20
		M24900	nuclear receptor subfamily 1, group D, member 1	-2.15
		Z11773	zinc finger protein 187	-2.13
		X07384	glioma-associated oncogene homolog (zinc finger protein)	-2.10
		X65233	zinc finger protein 80 (pT17)	-1.88
		J03407	ret finger protein	-1.82
		AB011414	Kruppel-type zinc finger (C2H2)	-1.79
		D30758	centaurin, beta 1	-1.74
		U65404	Kruppel-like factor 1 (erythroid)	-1.73
		X89894	nuclear receptor subfamily 4, group A, member 3	-1.51
		W28870	Kruppel-like factor 4 (gut)	-1.42
		AC002086	Kaiso	-1.34
		S71020	ESTs	-1.22
	B.1.4.1.5	Rel homology region		
		L41067	nuclear factor of activated T-cells, cytoplasmic, calcineurin-depe	2.62
		L41067	nuclear factor of activated T-cells, cytoplasmic, calcineurin-depe	1.97
		M58603	nuclear factor of kappa light polypeptide gene enhancer in B-ce	1.83
		U33838	RELA V-rel reticuloendotheliosis viral oncogene homolog A, nu	-2.63
		L41066	nuclear factor of activated T-cells, cytoplasmic, calcineurin-depe	-2.44
	B.1.4.1.99	Other DNA-binding transcription factors		
		L31881	nuclear factor I/X (CCAAT-binding transcription factor)	11.35
		U61145	enhancer of zeste homolog 2 (Drosophila)	5.74
		AB021868	protein inhibitor of activated STAT3	4.14
		D38073	MCM3 minichromosome maintenance deficient 3 (S. cerevisiae)	3.88
		X64229	DEK oncogene (DNA binding)	3.18
		D55716	MCM7 minichromosome maintenance deficient 7 (S. cerevisiae)	2.90
		Y13467	PPAR binding protein	2.67
		AF069747	core-binding factor, runt domain, alpha subunit 2; translocated t	2.60
		D26121	splicing factor 1, alternatively spliced product, complete cds	2.35
		M69043	nuclear factor of kappa light polypeptide gene enhancer in B-ce	1.90
		X74143	forkhead box G1A	-22.65
		X52221	excision repair cross-complementing rodent repair deficiency, c	-2.61
		X90978	runt-related transcription factor 1 (acute myeloid leukemia 1; am	-2.55
		U13991	TAF10 RNA polymerase II, TATA box binding protein (TBP)-ass	-2.10
		D85131	MYC-associated zinc finger protein (purine-binding transcription)	-2.06
		XM_008679	tumor protein p53 (Li-Fraumeni syndrome)	-2.06

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		L29277	signal transducer and activator of transcription 3 (acute-phase response)	-1.89
		X90976	runt-related transcription factor 1 (acute myeloid leukemia 1; amylase)	-1.52
		U18671	signal transducer and activator of transcription 2, 113kD	-1.50
	B.1.4.99.0	Other transcription factors		
		U91616	nuclear factor of kappa light polypeptide gene enhancer in B-cells, type 1	3.13
		X74262	retinoblastoma binding protein 4	2.53
		U85658	transcription factor AP-2 gamma (activating enhancer binding protein 2)	2.42
		S78825	inhibitor of DNA binding 1, dominant negative helix-loop-helix protein	2.26
		S66431	retinoblastoma binding protein 2	2.10
		D13891	inhibitor of DNA binding 2, dominant negative helix-loop-helix protein	2.04
		AW274275	SWI/SNF related, matrix associated, actin dependent regulator	2.01
		AF045451	NGFI-A binding protein 1 (EGR1 binding protein 1)	1.87
		U68019	MAD, mothers against decapentaplegic homolog 3 (Drosophila)	1.83
		NM_005995	T-box 10 (TBX10) mRNA.	1.66
		Z35278	runt-related transcription factor 3	1.36
		U41843	DR1-associated protein 1 (negative cofactor 2 alpha)	-14.77
		AF043244	nucleolar protein 3 (apoptosis repressor with CARD domain)	-3.19
		AF010601	MAD, mothers against decapentaplegic homolog 5 (Drosophila)	-2.76
		U78313	MyoD family inhibitor	-2.36
		M97936	signal transducer and activator of transcription 1, 91kD	-2.14
		U59913	MAD, mothers against decapentaplegic homolog 5 (Drosophila)	-2.02
		M97936	signal transducer and activator of transcription 1, 91kD	-1.99
		X83928	TAF11 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 30kD	-1.88
		AF010193	MAD, mothers against decapentaplegic homolog 7 (Drosophila)	-1.75
B.2.0.0.0	Membrane transport			
B.2.1.0.0	Channels and porins			
B.2.1.1.0	Ion channels			
	B.2.1.1.1	Potassium channels		
		U16126	glutamate receptor, ionotropic, kainate 2	3.71
		U62437	cholinergic receptor, nicotinic, beta polypeptide 2 (neuronal)	3.34
		U33632	potassium channel, subfamily K, member 1 (TWIK-1)	2.32
		AF043472	potassium voltage-gated channel, delayed-rectifier, subfamily S	1.45
		M55513	potassium voltage-gated channel, shaker-related subfamily, member 3	-3.00
		AF048713	potassium voltage-gated channel, Shal-related subfamily, member 1	-2.20
		D50312	potassium inwardly-rectifying channel, subfamily J, member 8	-1.72
		U52155	potassium inwardly-rectifying channel, subfamily J, member 10	-1.20
	B.2.1.1.2	Calcium channels		
		AF038852	calcium channel, voltage-dependent, beta 4 subunit	8.12
		U16126	glutamate receptor, ionotropic, kainate 2	3.71
		U62437	cholinergic receptor, nicotinic, beta polypeptide 2 (neuronal)	3.34
		D26070	inositol 1,4,5-triphosphate receptor, type 1	3.04
		D26070	inositol 1,4,5-triphosphate receptor, type 1	2.91
		L27745	calcium channel, voltage-dependent, alpha 1E subunit	2.00
		M76559	calcium channel, voltage-dependent, alpha 2/delta subunit 1	-1.22
	B.2.1.1.3	Chloride channels		
		S82769	gamma-aminobutyric acid (GABA) A receptor, gamma 3	1.60
		Z30643	chloride channel Ka	-2.55
		AL117599	chloride channel 3	-1.15
	B.2.1.1.4	Sodium channels		
		U16126	glutamate receptor, ionotropic, kainate 2	3.71
		U62437	cholinergic receptor, nicotinic, beta polypeptide 2 (neuronal)	3.34
		X87160	sodium channel, nonvoltage-gated 1, gamma	-7.85
	B.2.1.2.0	Water channels		
		AB001325	aquaporin 3	-2.85
		AB006190	aquaporin 7	-1.65

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	B.2.1.99.0	Other channels and porins		
		AF014643	connexin46.6	-6.74
		M65188	gap junction protein, alpha 1, 43kD (connexin 43)	-2.32
	B.2.2.0.0 Transporters and pumps			
	B.2.2.1.0 Amino acid and peptide transporters			
		D87432	solute carrier family 7 (cationic amino acid transporter, y+ system)	2.94
		Y18483	solute carrier family 7 (cationic amino acid transporter, y+ system)	-2.19
		J02939	solute carrier family 3 (activators of dibasic and neutral amino acids)	-1.91
		X57303	solute carrier family 7 (cationic amino acid transporter, y+ system)	-1.43
	B.2.2.2.0 Sugar transporters			
		D84454	solute carrier family 35 (UDP-galactose transporter), member 2	3.13
		Y15409	glucose-6-phosphatase, transport (glucose-6-phosphate) protein	1.84
		Z83839	solute carrier family 5 (sodium/glucose cotransporter), member 1	-3.35
	B.2.2.7.0 Drug transporters			
		AF085692	ATP-binding cassette, sub-family C (CFTR/MRP), member 3	3.09
		U83661	ATP-binding cassette, sub-family C (CFTR/MRP), member 5	2.10
	B.2.2.9.0 Anion transporters			
		AI344681	ATP-binding cassette, sub-family A (ABC1), member 1	-2.81
	B.2.2.9.1 Inorganic anion transporters			
		W28214	solute carrier family 4 (anion exchanger), member 1, adaptor protein	2.32
	B.2.2.9.2 Organic anion transporters			
		AB009698	solute carrier family 22 (organic anion transporter), member 6	2.16
		AA705628	solute carrier family 16 (monocarboxylic acid transporters), member 1	-2.67
	B.2.2.10.0 Cation transporters			
	B.2.2.10.1 Proton transporters			
		J05682	ATPase, H+ transporting, lysosomal (vacuolar proton pump) 42	2.07
		X63422	ATP synthase, H+ transporting, mitochondrial F1 complex, delta chain	-3.07
		X71490	ATPase, H+ transporting, lysosomal (vacuolar proton pump), mitochondrial	-2.48
		BE615085	ATP synthase, H+ transporting, mitochondrial F1 complex, beta chain	-2.26
		X60221	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit 6	-2.19
		M62762	ATPase, H+ transporting, lysosomal (vacuolar proton pump) 16	-2.08
		M75110	ATPase, H+/K+ exchanging, beta polypeptide	-1.83
	B.2.2.10.2 Sodium transporters			
		AB012130	solute carrier family 4, sodium bicarbonate cotransporter, member 1	2.26
		Z83839	solute carrier family 5 (sodium/glucose cotransporter), member 1	-3.35
		AF007216	solute carrier family 4, sodium bicarbonate cotransporter, member 4	-1.36
	B.2.2.10.3 Potassium transporters			
		M75110	ATPase, H+/K+ exchanging, beta polypeptide	-1.83
	B.2.2.10.4 Calcium transporters			
		M83363	ATPase, Ca++ transporting, plasma membrane 4	-2.53
	B.2.2.99.0 Other transporters and pumps			
		AF000148	ATP-binding cassette, sub-family A (ABC1), member 4	3.47
		Y14318	ATP-binding cassette, sub-family D (ALD), member 4	1.76
	B.3.0.0.0 Protein modification and maintenance			
	B.3.1.0.0 Proteases			
	B.3.1.1.0 Metalloproteases			
		X51405	carboxypeptidase E	4.07
		M13509	matrix metalloproteinase 1 (interstitial collagenase)	-7.32
		U69611	a disintegrin and metalloproteinase domain 17 (tumor necrosis factor type I receptor)	-2.86
		J05070	matrix metalloproteinase 9 (gelatinase B, 92kD gelatinase, 92kDa type IV collagenase)	-2.16
		AL049415	a disintegrin and metalloproteinase domain 19 (meltrin beta)	-2.10
		U41767	a disintegrin and metalloproteinase domain 15 (metarginidin)	-1.77
		X07820	matrix metalloproteinase 10 (stromelysin 2)	-1.35
	B.3.1.2.0 Serine proteases			
		J04080	complement component 1, s subcomponent	3.18

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		X07732	hepsin (transmembrane protease, serine 1)	2.41
		AW968384	coagulation factor VII (serum prothrombin conversion accelerator)	-5.80
		AL050220	kallikrein 13	-3.50
		X17094	paired basic amino acid cleaving enzyme (furin, membrane ass)	-2.59
		AB002134	airway trypsin-like protease	-2.40
		M31315	coagulation factor XII (Hageman factor)	-2.37
		AF015287	protease, serine, 23	-1.97
		AI767675	chymotrypsin-like	-1.96
		AC003965	protease, serine, 22	-1.96
		AB008390	kallikrein 8 (neuropsin/ovasin)	-1.86
	B.3.1.3.0	Cysteine proteases		
		AB001928	cathepsin L2	2.64
		AB014458	ubiquitin specific protease 1	2.51
		U20536	caspase 6, apoptosis-related cysteine protease	1.71
		U60519	caspase 10, apoptosis-related cysteine protease	1.51
		L22569	cathepsin B	1.44
		AB011101	ubiquitin specific protease 15	-3.10
		X85030	calpain 3, (p94)	-2.49
	B.3.1.5.0	Threonine proteases		
		AF054185	proteasome (prosome, macropain) subunit, alpha type, 7	-3.42
		AB009398	proteasome (prosome, macropain) 26S subunit, non-ATPase, 1	-3.01
		AI767675	chymotrypsin-like	-1.96
	B.3.1.99.0	Other proteases		
		J04605	peptidase D	-2.08
	B.3.2.0.0	Protease inhibitors		
		AI961220	serine protease inhibitor, Kazal type 1	1.93
		M93056	serine (or cysteine) proteinase inhibitor, clade B (ovalbumin), m	1.61
		D83174	serine (or cysteine) proteinase inhibitor, clade H (heat shock pro	-3.44
		D11139	tissue inhibitor of metalloproteinase 1 (erythroid potentiating act	-3.17
		AI362017	cystatin C (amyloid angiopathy and cerebral hemorrhage)	-2.65
		X04470	secretory leukocyte protease inhibitor (antileukoproteinase)	-2.40
	B.3.5.0.0	Protein acetyl-transferases		
		AF030424	histone acetyltransferase 1	2.20
	B.3.6.0.0	Protein isomerases		
		D63861	peptidylprolyl isomerase D (cyclophilin D)	1.94
		D38552	KIAA0073 protein	1.89
		L37033	FK506 binding protein 8 (38kD)	-5.53
		M63573	peptidylprolyl isomerase B (cyclophilin B)	-3.36
		D38037	FK506 binding protein 1B (12.6 kD)	-2.43
		S71018	peptidylprolyl isomerase C (cyclophilin C)	-1.95
	B.3.7.0.0	Chaperones		
	B.3.7.1.0	Heat shock proteins		
	B.3.7.1.2	hsp-20 proteins		
		Z23090	heat shock 27kD protein 1	3.31
		BF727413	crystallin, alpha B	1.98
		BF447235	crystallin, alpha B	1.88
		U05569	crystallin, alpha A	-2.08
	B.3.7.1.4	hsp-70 proteins		
		L26336	heat shock 70kD protein 2	1.95
		M59830	heat shock 70kD protein 1B	-2.50
		W26343	heat shock 70kD protein 5 (glucose-regulated protein, 78kD)	-1.25
	B.3.7.1.99	Other heat shock proteins		
		AW024467	DnaJ (Hsp40) homolog, subfamily C, member 4	-2.11
	B.3.7.99.0	Other chaperones		
		D83174	serine (or cysteine) proteinase inhibitor, clade H (heat shock pro	-3.44

## E6E7\_pLC Function Hierarchy

B.4.0.0.0 Nucleic acid synthesis and modification			
B.4.1.0.0 Polymerases			
	D26018	polymerase (DNA directed), delta 3	6.04
	AF025840	polymerase (DNA directed), epsilon 2	5.41
	U21090	polymerase (DNA directed), delta 2, regulatory subunit (50kD)	5.23
	W74442	polymerase (DNA directed), gamma	4.55
	AL080203	polymerase (DNA directed), epsilon	3.67
	X06745	polymerase (DNA directed), alpha	3.49
	X74330	primase, polypeptide 1 (49kD)	2.92
	X74331	primase, polypeptide 2A (58kD)	2.77
	U37689	polymerase (RNA) II (DNA directed) polypeptide H	2.17
	U75370	polymerase (RNA) mitochondrial (DNA directed)	2.07
	U37689	polymerase (RNA) II (DNA directed) polypeptide H	1.86
	NM_000517	hemoglobin, alpha 1	-2.04
B.4.2.0.0 Ligases			
	X84740	ligase III, DNA, ATP-dependent	1.94
	AL039458	ortholog of mouse integral membrane glycoprotein LIG-1	1.53
B.4.3.0.0 Nucleases			
	Z97029	ribonuclease HI, large subunit	8.17
	AW248553	flap structure-specific endonuclease 1	6.11
	BF796299	flap structure-specific endonuclease 1	5.77
	AF084513	RAD1 homolog (S. pombe)	3.06
	AA203527	POP7 (processing of precursor, S. cerevisiae) homolog	2.94
	BF796299	flap structure-specific endonuclease 1 <TIGR>	2.23
	AB020523	endonuclease G-like 1	-3.46
	M13194	excision repair cross-complementing rodent repair deficiency, c	-1.97
B.4.4.0.0 Methylases			
	X63692	DNA (cytosine-5)-methyltransferase 1	3.48
B.4.5.0.0 Helicases			
	U90426	nuclear RNA helicase, DECD variant of DEAD box family	2.80
	AB006532	RecQ protein-like 4	2.59
	AB028449	Dicer1, Dcr-1 homolog (Drosophila)	2.45
	L36140	RecQ protein-like (DNA helicase Q1-like)	2.20
	D50487	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 8 (RNA helicas	2.15
	M30938	X-ray repair complementing defective repair in Chinese hamste	2.11
	AW274275	SWI/SNF related, matrix associated, actin dependent regulator	2.01
	L76937	Werner syndrome	1.46
	U41387	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 21	-3.53
	X52221	excision repair cross-complementing rodent repair deficiency, c	-2.61
B.4.6.0.0 Topoisomerases			
	AI375913	topoisomerase (DNA) II alpha (170kD)	3.13
	AL561834	topoisomerase (DNA) II alpha (170kD)	2.09
	U07804	topoisomerase (DNA) I	1.95
B.4.8.0.0 Splicing factors			
	AF026402	prp28, U5 snRNP 100 kd protein	4.17
	AI184802	PRP4/STK/WD splicing factor	2.22
	D50487	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 8 (RNA helicas	2.15
	AA176264	small nuclear ribonucleoprotein polypeptide A	2.08
	AL050369	PRP31 pre-mRNA processing factor 31 homolog (yeast)	1.95
	X66975	polypyrimidine tract binding protein 1	1.81
	L21990	splicing factor 3a, subunit 2, 66kD	-16.00
	AJ131186	nuclear matrix protein NMP200 related to splicing factor PRP19	-3.53
	AI087268	small nuclear ribonucleoprotein polypeptide C	-2.03
	L35013	splicing factor 3b, subunit 4, 49kD	-1.97
B.4.9.0.0 Single stranded binding proteins			

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		M63488	replication protein A1 (70kD)	2.99
		M63488	replication protein A1 (70kD)	2.50
		AL022097	heterogeneous nuclear ribonucleoprotein A1	2.17
B.4.99.0.0	Other nucleic acid synthesis and modification			
		M74905	N-methylpurine-DNA glycosylase	-3.34
B.5.0.0.0	Adhesion and molecular recognition			
B.5.1.0.0	Adhesion			
B.5.1.2.0	Integrins			
		X15606	intercellular adhesion molecule 2	1.32
		Y00093	integrin, alpha X (antigen CD11C (p150), alpha polypeptide)	-1.92
		AB008375	integrin, beta-like 1 (with EGF-like repeat domains)	-1.34
		S70348	integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)	-1.33
B.5.1.3.0	Ig superfamily			
		X16841	neural cell adhesion molecule 1	2.55
		X69819	intercellular adhesion molecule 3	2.45
		X15606	intercellular adhesion molecule 2	1.32
		AA126505	neural cell adhesion molecule 1	-3.30
		M95627	angio-associated, migratory cell protein	-2.64
B.5.1.4.0	Cadherins			
		U59289	cadherin 13, H-cadherin (heart)	3.03
		U59325	cadherin 18, type 2	1.48
		AF152477	protocadherin alpha 12	-2.59
		L11369	PCDH1 Protocadherin 1 (cadherin-like 1)	-1.68
B.5.1.99.0	Other adhesion			
		M60922	flotillin 2	5.58
		U37139	integrin beta 3 binding protein (beta3-endonexin)	4.31
		U37139	integrin beta 3 binding protein (beta3-endonexin)	3.87
		X03168	vitronectin (serum spreading factor, somatomedin B, compleme	1.74
		X78565	hexabrachion (tenascin C, cytотactин)	-3.05
		AB020675	contactin associated protein-like 2	-2.40
		AB029037	trophinin	-2.22
		Z34974	plakophilin 1 (ectodermal dysplasia/skin fragility syndrome)	-2.06
B.5.2.0.0	Antigen recognition			
B.5.2.1.0	MHC			
		D14678	kinesin-like 2	3.21
		D14678	kinesin-like 2	2.97
		M12807	CD4 antigen (p55)	1.02
		X00457	major histocompatibility complex, class II, DP alpha 1	-4.05
		AV752612	major histocompatibility complex, class I, F	-3.13
		M83664	major histocompatibility complex, class II, DP beta 1	-2.28
		D32129	major histocompatibility complex, class I, A	-1.98
		X66436	guanine nucleotide binding protein-like 1	-1.95
B.5.2.2.0	T-cell receptors			
		AE000659	T-cell receptor alpha delta locus from bases 250472 to 501670	-4.11
B.5.2.3.0	Immunoglobulins			
		AU142027	gamma-glutamyltransferase-like activity 1	-2.43
		AI241852	ESTs, Highly similar to EHHU Ig epsilon chain C region [H.sapi	-2.00
B.5.3.0.0	Lectins			
		AA010777	lectin, galactoside-binding, soluble, 7 (galectin 7)	5.14
		X96719	C-type (calcium dependent, carbohydrate-recognition domain) I	1.87
		AI535946	lectin, galactoside-binding, soluble, 1 (galectin 1)	-2.47
B.6.0.0.0	Electron transfer			
B.6.1.0.0	Cytochromes			
		AI344343	hypothetical protein MGC10433	-3.46
		M26856	cytochrome P450, subfamily XXIA (steroid 21-hydroxylase, con	-2.65

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		M61854	cytochrome P450, subfamily IIC (mephenytoin 4-hydroxylase), polypeptide 1	-2.29
		X02612	cytochrome P450, subfamily I (aromatic compound-inducible), polypeptide 1	-1.97
		M21186	cytochrome b-245, alpha polypeptide	-1.90
		X55764	cytochrome P450, subfamily XIB (steroid 11-beta-hydroxylase), polypeptide 1	-1.71
		AA152406	cytochrome c oxidase subunit VIIa polypeptide 1 (muscle)	-1.58
B.6.3.0.0	Flavoproteins			
		AA856613	acyl-Coenzyme A dehydrogenase, C-4 to C-12 straight chain	2.51
B.6.99.0.0	Other electron transfer proteins			
		U78678	thioredoxin 2	-2.40
		L16842	ubiquinol-cytochrome c reductase core protein I	-1.86
B.7.0.0.0	Localized and structural proteins			
B.7.1.0.0	Secreted and extracellular			
B.7.1.1.0	Extracellular matrix			
B.7.1.1.99	Other extracellular matrix			
		U68186	extracellular matrix protein 1	2.90
		AF020043	chondroitin sulfate proteoglycan 6 (bamacan)	2.60
		X86570	keratin, hair, acidic, 1	2.36
		M85289	heparan sulfate proteoglycan 2 (perlecan)	2.16
		AF019413	tenascin XB	2.03
		U37283	Microfibril-associated glycoprotein-2	1.80
		M13509	matrix metalloproteinase 1 (interstitial collagenase)	-7.32
		D11139	tissue inhibitor of metalloproteinase 1 (erythroid potentiating actin)	-3.17
		X78565	hexabrachion (tenascin C, cytотactин)	-3.05
		M86933	amelogenin (Y chromosome)	-2.29
		J05070	matrix metalloproteinase 9 (gelatinase B, 92kD gelatinase, 92kD stromelysin)	-2.16
		J03040	secreted protein, acidic, cysteine-rich (osteonectin)	-2.14
		M77349	transforming growth factor, beta-induced, 68kD	-2.12
		AC002366	amelogenin (X chromosome, amelogenesis imperfecta 1)	-1.79
		AB011792	extracellular matrix protein 2, female organ and adipocyte specific	-1.66
		X07820	matrix metalloproteinase 10 (stromelysin 2)	-1.35
		AF009243	proline-rich Gla (G-carboxyglutamic acid) polypeptide 2	-1.25
B.7.1.99.0	Other secreted and extracellular			
		U94319	PSIP2 PC4 and SFRS1 interacting protein 2	5.66
		L48516	paraoxonase 3	4.71
		M57399	pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor)	4.69
		L13720	growth arrest-specific 6	4.41
		U18467	pregnancy specific beta-1-glycoprotein 7	4.33
		X51405	carboxypeptidase E	4.07
		N30625	cortistatin	3.88
		J04080	complement component 1, s subcomponent	3.18
		L08096	tumor necrosis factor (ligand) superfamily, member 7	2.87
		X55110	midkine (neurite growth-promoting factor 2)	2.74
		M57399	pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor)	2.63
		L19182	insulin-like growth factor binding protein 7	2.51
		AI358867	apolipoprotein E	2.50
		AF024710	vascular endothelial growth factor	2.44
		U25997	stanniocalcin 1	2.17
		AF022375	vascular endothelial growth factor	2.16
		X76029	neuromedin U	2.13
		L19711	dystroglycan 1 (dystrophin-associated glycoprotein 1)	1.97
		XM_004381	vasoactive intestinal peptide	1.96
		AI961220	serine protease inhibitor, Kazal type 1	1.93
		X02812	transforming growth factor, beta 1 (Camurati-Engelmann disease)	1.89
		X03656	colony stimulating factor 3 (granulocyte)	1.76
		X03168	vitronectin (serum spreading factor, somatomedin B, complement factor H)	1.74

## E6E7\_pLC Function Hierarchy

		X17610	pregnancy specific beta-1-glycoprotein 9	1.64
		J00207	interferon, alpha 2	1.30
		M57729	complement component 5	1.16
		AF063020	PC4 and SFRS1 interacting protein 2	1.11
		X99977	ARS component B	-19.66
		M62402	insulin-like growth factor binding protein 6	-11.39
		M63193	endothelial cell growth factor 1 (platelet-derived)	-6.56
		M63573	peptidylprolyl isomerase B (cyclophilin B)	-3.36
		X06374	platelet-derived growth factor alpha polypeptide	-3.15
		L26232	phospholipid transfer protein	-3.10
		X64364	basigin (OK blood group)	-2.98
		J03802	parathyroid hormone-like hormone	-2.75
		U52840	sema domain, seven thrombospondin repeats (type 1 and type	-2.72
		K03203	proline-rich protein Haell subfamily 1	-2.72
		X04412	gelsolin (amyloidosis, Finnish type)	-2.68
		M22488	bone morphogenetic protein 1	-2.68
		AL562644	insulin-like growth factor binding protein 2 (36kD)	-2.55
		M12529	apolipoprotein E	-2.53
		AI819249	cytokine receptor-like factor 1	-2.50
		U14383	mucin 8, tracheobronchial	-2.43
		AB002134	airway trypsin-like protease	-2.40
		X04470	secretory leukocyte protease inhibitor (antileukoproteinase)	-2.40
		X07704	proline-rich protein BstNI subfamily 4	-2.38
		M31315	coagulation factor XII (Hageman factor)	-2.37
		AA398174	lysozyme homolog	-2.31
		X16302	insulin-like growth factor binding protein 2 (36kD)	-2.23
		Y13710	chemokine (C-C motif) ligand 18 (pulmonary and activation-regu	-2.23
		M13699	ceruloplasmin (ferroxidase)	-2.22
		X68679	complement factor H related 3	-2.20
		AI591151	parathyroid hormone-like hormone	-2.16
		Z19585	thrombospondin 4	-2.13
		M88338	serum constituent protein	-2.09
		U46573	chemokine (C-C motif) ligand 11	-2.04
		L36033	stromal cell-derived factor 1	-2.03
		AB000220	sema domain, immunoglobulin domain (Ig), short basic domain	-2.00
		AW058221	lipase, gastric	-1.97
		AI767675	chymotrypsin-like	-1.96
		AC003965	protease, serine, 22	-1.96
		M35093	mucin 1, transmembrane	-1.96
		AF059293	cytokine receptor-like factor 1	-1.88
		K03207	proline-rich protein BstNI subfamily 4	-1.80
		M96956	teratocarcinoma-derived growth factor 1	-1.66
		X00173	insulin-like growth factor 1 (somatomedin C)	-1.62
		AF100780	WNT1 inducible signaling pathway protein 2	-1.61
		K02054	gastrin-releasing peptide	-1.61
		M93283	pancreatic lipase-related protein 1	-1.47
		D63521	leukocyte cell-derived chemotaxin 2	-1.45
		D14838	fibroblast growth factor 9 (glia-activating factor)	-1.40
		U64197	chemokine (C-C motif) ligand 20	-1.37
		X04688	interleukin 5 (colony-stimulating factor, eosinophil)	-1.34
		M22490	bone morphogenetic protein 4	-1.29
		NM_000477	albumin	-1.16
		X67697	sperm associated antigen 11	-1.06
		M15881	uromodulin (uromucoid, Tamm-Horsfall glycoprotein)	-1.04
	B.7.3.0.0 Membrane			

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	B.7.3.1.0	Integral membrane proteins	
	AF038852	calcium channel, voltage-dependent, beta 4 subunit	8.12
	M60922	flotillin 2	5.58
	BG231597	fatty acid desaturase 3	5.55
	U17418	parathyroid hormone receptor 1	4.55
	AL552324	prostaglandin I2 (prostacyclin) receptor (IP)	4.28
	AI813532	tumor necrosis factor receptor superfamily, member 1B	3.76
	AF000959	claudin 5 (transmembrane protein deleted in velocardiofacial syndrome)	3.74
	AI693193	metaxin 1	3.71
	U16126	glutamate receptor, ionotropic, kainate 2	3.71
	AF000148	ATP-binding cassette, sub-family A (ABC1), member 4	3.47
	U62437	cholinergic receptor, nicotinic, beta polypeptide 2 (neuronal)	3.34
	Y12505	5-hydroxytryptamine (serotonin) receptor 4	3.32
	D14678	kinesin-like 2	3.21
	D84454	solute carrier family 35 (UDP-galactose transporter), member 2	3.13
	AF061193	ectodermal dysplasia 1, anhidrotic	3.10
	AF085692	ATP-binding cassette, sub-family C (CFTR/MRP), member 3	3.09
	D26070	inositol 1,4,5-triphosphate receptor, type 1	3.04
	X68149	Burkitt lymphoma receptor 1, GTP binding protein	3.00
	D14678	kinesin-like 2	2.97
	D87432	solute carrier family 7 (cationic amino acid transporter, y+ system)	2.94
	D26070	inositol 1,4,5-triphosphate receptor, type 1	2.91
	L08096	tumor necrosis factor (ligand) superfamily, member 7	2.87
	D50840	UDP-glucose ceramide glucosyltransferase	2.86
	AF065388	tetraspan 1	2.82
	W26480	fatty acid desaturase 1	2.74
	X16841	neural cell adhesion molecule 1	2.55
	D79997	maternal embryonic leucine zipper kinase	2.50
	X69819	intercellular adhesion molecule 3	2.45
	X07732	hepsin (transmembrane protease, serine 1)	2.41
	AF002020	Niemann-Pick disease, type C1	2.35
	U33632	potassium channel, subfamily K, member 1 (TWIK-1)	2.32
	AB012130	solute carrier family 4, sodium bicarbonate cotransporter, member 1	2.26
	X01060	transferrin receptor (p90, CD71)	2.23
	AI887421	retinoic acid receptor responder (tazarotene induced) 1	2.23
	S81914	immediate early response 3	2.21
	U03398	tumor necrosis factor (ligand) superfamily, member 9	2.18
	AB009698	solute carrier family 22 (organic anion transporter), member 6	2.16
	L38961	integral membrane protein 1	2.15
	X59770	interleukin 1 receptor, type II	2.14
	U60808	CDP-diacylglycerol synthase (phosphatidate cytidylyltransferase)	2.13
	U83661	ATP-binding cassette, sub-family C (CFTR/MRP), member 5	2.10
	J05682	ATPase, H <sup>+</sup> transporting, lysosomal (vacuolar proton pump) 42	2.07
	U77942	syntaxin 7	2.06
	L27745	calcium channel, voltage-dependent, alpha 1E subunit	2.00
	AF002020	Niemann-Pick disease, type C1	1.99
	X51417	estrogen-related receptor beta	1.99
	U51240	Lysosomal-associated multispanning membrane protein-5	1.98
	L19711	dystroglycan 1 (dystrophin-associated glycoprotein 1)	1.97
	J04162	Fc fragment of IgG, low affinity IIIb, receptor for (CD16)	1.94
	NM_003383	very low density lipoprotein receptor	1.94
	AB011083	adenylate cyclase 3	1.92
	X02160	insulin receptor	1.87
	L06139	TEK tyrosine kinase, endothelial (venous malformations, multiplex)	1.83
	J03171	interferon (alpha, beta and omega) receptor 1	1.80

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			Z37986	emopamil binding protein (sterol isomerase)	1.78
			Y14318	ATP-binding cassette, sub-family D (ALD), member 4	1.76
			X63717	tumor necrosis factor receptor superfamily, member 6	1.75
			S69115	natural killer cell group 7 sequence	1.63
			S82769	gamma-aminobutyric acid (GABA) A receptor, gamma 3	1.60
			X58288	protein tyrosine phosphatase, receptor type, M	1.50
			U59325	cadherin 18, type 2	1.48
			AF043472	potassium voltage-gated channel, delayed-rectifier, subfamily S	1.45
			AF095448	retinoic acid induced 3	1.45
			XM_009380	olfactory receptor, family 10, subfamily H, member 3	1.44
			AF009767	fatty acid desaturase 1	1.35
			U31449	transmembrane 4 superfamily member 4	1.34
			X15606	intercellular adhesion molecule 2	1.32
			X58288	protein tyrosine phosphatase, receptor type, M	1.30
			M12807	CD4 antigen (p55)	1.02
			X87160	sodium channel, nonvoltage-gated 1, gamma	-7.85
			AF014643	connexin46.6	-6.74
			D29963	CD151 antigen	-6.05
			AW376361	solute carrier family 25 (mitochondrial carrier; adenine nucleotide transporter), member 1	-5.31
			D28137	bone marrow stromal cell antigen 2	-4.92
			AV734794	CD74 antigen (invariant polypeptide of major histocompatibility complex, class II)	-4.65
			AE000659	T-cell receptor alpha delta locus from bases 250472 to 501670	-4.11
			X00457	major histocompatibility complex, class II, DP alpha 1	-4.05
			D16105	leukocyte tyrosine kinase	-3.96
			Z23115	BCL2-like 1	-3.80
			X03363	v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neu	-3.74
			D13305	cholecystokinin B receptor	-3.58
			X76220	mal, T-cell differentiation protein	-3.44
			X57351	interferon induced transmembrane protein 2 (1-8D)	-3.40
			L22206	arginine vasopressin receptor 2 (nephrogenic diabetes insipidus)	-3.40
			Z83839	solute carrier family 5 (sodium/glucose cotransporter), member 1	-3.35
			AA126505	neural cell adhesion molecule 1	-3.30
			U16811	BCL2-antagonist/killer 1	-3.29
			U87947	epithelial membrane protein 3	-3.25
			AV752612	major histocompatibility complex, class I, F	-3.13
			M28825	CD1A antigen, a polypeptide	-3.10
			X63422	ATP synthase, H <sup>+</sup> transporting, mitochondrial F1 complex, delta subunit	-3.07
			AI701514	claudin 9	-3.05
			Z94155	G protein-coupled receptor 17	-3.02
			U17579	growth hormone releasing hormone receptor	-3.02
			M55513	potassium voltage-gated channel, shaker-related subfamily, member 3	-3.00
			X64364	basigin (OK blood group)	-2.98
			D83492	EphB6	-2.98
			X56807	desmocollin 2	-2.86
			AB001325	aquaporin 3	-2.85
			X51362	dopamine receptor D2	-2.84
			D50402	solute carrier family 11 (proton-coupled divalent metal ion transporter), member 1	-2.83
			AI344681	ATP-binding cassette, sub-family A (ABC1), member 1	-2.81
			AA705628	solute carrier family 16 (monocarboxylic acid transporters), member 1	-2.67
			U31216	glutamate receptor, metabotropic 1	-2.63
			X17094	paired basic amino acid cleaving enzyme (furin, membrane associated)	-2.59
			D15057	defender against cell death 1	-2.58
			L32179	arylacetamide deacetylase (esterase)	-2.57
			Z30643	chloride channel Ka	-2.55
			M83363	ATPase, Ca <sup>++</sup> transporting, plasma membrane 4	-2.53

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		X71490	ATPase, H+ transporting, lysosomal (vacuolar proton pump), m	-2.48
		U79528	sigma receptor (SR31747 binding protein 1)	-2.43
		AF023676	transmembrane 7 superfamily member 2	-2.43
		M31932	Fc fragment of IgG, low affinity IIa, receptor for (CD32)	-2.38
		U09210	solute carrier family 18 (vesicular acetylcholine), member 3	-2.36
		AJ302576	olfactory receptor, family 2, subfamily J, member 2	-2.34
		M65188	gap junction protein, alpha 1, 43kD (connexin 43)	-2.32
		AF085807	uroplakin 1A	-2.31
		M83664	major histocompatibility complex, class II, DP beta 1	-2.28
		M76482	desmoglein 3 (pemphigus vulgaris antigen)	-2.27
		BE615085	ATP synthase, H+ transporting, mitochondrial F1 complex, beta	-2.26
		AB029037	trophinin	-2.22
		M14745	B-cell CLL/lymphoma 2	-2.22
		AF048713	potassium voltage-gated channel, Shal-related subfamily, mem	-2.20
		X60221	ATP synthase, H+ transporting, mitochondrial F0 complex, subu	-2.19
		Y18483	solute carrier family 7 (cationic amino acid transporter, y+ syste	-2.19
		X04571	epidermal growth factor (beta-urogastrone)	-2.19
		M80634	fibroblast growth factor receptor 2 (bacteria-expressed kinase, k	-2.17
		AF023614	transmembrane activator and CAML interactor	-2.12
		U01160	sarcoma amplified sequence	-2.12
		X57282	erythropoietin receptor	-2.11
		M62762	ATPase, H+ transporting, lysosomal (vacuolar proton pump) 16	-2.08
		X76534	glycoprotein (transmembrane) nmb	-2.07
		U03642	angiotensin receptor-like 1	-2.05
		U56418	1-acylglycerol-3-phosphate O-acyltransferase 2 (lysophosphati	-2.03
		X76079	platelet-derived growth factor receptor, alpha polypeptide	-2.01
		AA477898	integral membrane protein 2B	-2.01
		D32129	major histocompatibility complex, class I, A	-1.98
		M35093	mucin 1, transmembrane	-1.96
		Y00281	ribophorin I	-1.96
		U52426	stromal interaction molecule 1	-1.95
		X66436	guanine nucleotide binding protein-like 1	-1.95
		Y00093	integrin, alpha X (antigen CD11C (p150), alpha polypeptide)	-1.92
		X75208	EphB3	-1.90
		AF065389	tetraspan 5	-1.89
		U34038	coagulation factor II (thrombin) receptor-like 1	-1.89
		U32680	ceroid-lipofuscinosis, neuronal 3, juvenile (Batten, Spielmeyer-V	-1.88
		U66579	G protein-coupled receptor 20	-1.88
		U18548	G protein-coupled receptor 12	-1.84
		M75110	ATPase, H+/K+ exchanging, beta polypeptide	-1.83
		Z22533	activin A receptor type II-like 1	-1.82
		J04164	interferon induced transmembrane protein 1 (9-27)	-1.77
		D50312	potassium inwardly-rectifying channel, subfamily J, member 8	-1.72
		AF034633	G protein-coupled receptor 39	-1.70
		AB006190	aquaporin 7	-1.65
		L32831	G protein-coupled receptor 3	-1.43
		X57303	solute carrier family 7 (cationic amino acid transporter, y+ syste	-1.43
		AF056085	G protein-coupled receptor 51	-1.41
		U81262	ephrin-B2	-1.39
		S61953	v-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avia	-1.38
		AF007216	solute carrier family 4, sodium bicarbonate cotransporter, membr	-1.36
		M62424	coagulation factor II (thrombin) receptor	-1.35
		AB008375	integrin, beta-like 1 (with EGF-like repeat domains)	-1.34
		S70348	integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)	-1.33
		U17033	phospholipase A2 receptor 1, 180kD	-1.30

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		M76559	calcium channel, voltage-dependent, alpha 2/delta subunit 1	-1.22
		U52155	potassium inwardly-rectifying channel, subfamily J, member 10	-1.20
		AL117599	chloride channel 3	-1.15
	B.7.3.2.0	Peripheral and anchored membrane proteins		
		NM_005573	lamin B1	3.21
		U59289	cadherin 13, H-cadherin (heart)	3.03
		M57763	ADP-ribosylation factor 6	2.37
		U58516	milk fat globule-EGF factor 8 protein	1.86
		L25080	ras homolog gene family, member A	1.82
		AF002700	GDNF family receptor alpha 2	1.30
		X12534	RAP2A, member of RAS oncogene family	1.12
		U18420	RAB5C, member RAS oncogene family	-3.31
		L37360	ephrin-A3	-2.43
		M29870	ras-related C3 botulinum toxin substrate 1 (rho family, small GTPase)	-2.14
		M87284	2'-oligoadenylate synthetase 2 (69-71 kD)	-2.09
		J00277	v-Ha-ras Harvey rat sarcoma viral oncogene homolog	-2.02
		M28215	RAB5A, member RAS oncogene family	-1.96
		BE268682	related RAS viral (r-ras) oncogene homolog	-1.94
		BE551822	involucrin	-1.94
		X70326	macrophage myristoylated alanine-rich C kinase substrate	-1.85
		U50410	glypican 3	-1.58
		M15881	uromodulin (uromucoid, Tamm-Horsfall glycoprotein)	-1.04
	B.7.3.3.0	Vesicle coat proteins		
		NM_003383	very low density lipoprotein receptor	1.94
		X81636	Clathrin light chain a gene	-2.44
		AJ011733	synaptogyrin 4	-2.11
		AA128314	adaptor-related protein complex 1, sigma 2 subunit	-1.89
	B.7.3.99.0	Other membrane		
		N88277	acetyl-Coenzyme A carboxylase beta	3.03
		U84573	procollagen-lysine, 2-oxoglutarate 5-dioxygenase (lysine hydroxylating enzyme)	2.83
		AA194159	peroxisome biogenesis factor 10	2.33
		AF027299	erythrocyte membrane protein band 4.1-like 2	2.15
		U31601	Janus kinase 3 (a protein tyrosine kinase, leukocyte)	1.73
		M26856	cytochrome P450, subfamily XXIA (steroid 21-hydroxylase, constitutive)	-2.65
		AF060502	peroxisome biogenesis factor 10	-2.28
		U51333	hexokinase 3 (white cell)	-2.20
		Z16411	phospholipase C, beta 3 (phosphatidylinositol-specific)	-2.09
		X02612	cytochrome P450, subfamily I (aromatic compound-inducible), polypeptide 1	-1.97
		U02390	adenylyl cyclase-associated protein 2	-1.93
		M21186	cytochrome b-245, alpha polypeptide	-1.90
		L16842	ubiquinol-cytochrome c reductase core protein I	-1.86
		M58583	cerebellin 1 precursor	-1.74
		X55764	cytochrome P450, subfamily XIB (steroid 11-beta-hydroxylase), polypeptide 1	-1.71
		AV763746	erythrocyte membrane protein band 4.1 (elliptocytosis 1, RH-lin)	-1.25
	B.7.5.0.0	Cytoskeleton		
	B.7.5.1.0	Microtubules and associated proteins		
	B.7.5.1.1	Tubulins		
		M61764	tubulin, gamma 1	2.23
		K00558	hypothetical protein MGC12992	2.04
		J00314	FK506 binding protein 1A (12kD)	1.97
		X01703	tubulin, alpha 3	-2.39
		X06956	tubulin, alpha 1 (testis specific)	-2.22
		X00734	tubulin, beta, 5	-2.06
		X79535	Tubulin, Beta <TIGR>	-1.99
		X79535	Tubulin, beta polypeptide	-1.76

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		B.7.5.1.2 Microtubule-associated proteins	
		W26631	microtubule-associated protein 1A
		D86981	amyloid beta precursor protein (cytoplasmic tail) binding protein
		W27998	microtubule-associated proteins 1A/1B light chain 3
		B.7.5.2.0 Microfilaments and associated proteins	
		U37707	membrane protein, palmitoylated 3 (MAGUK p55 subfamily member)
		B.7.5.2.1 Actins	
		W25984	actin, alpha 1, skeletal muscle
		X13839	actin, alpha 2, smooth muscle, aorta
		AB015906	actin-like 6
		U20582	actin like protein
		B.7.5.2.2 Actin-associated proteins	
		J02923	lymphocyte cytosolic protein 1 (L-plastin)
		L21715	troponin I, skeletal, fast
		D42054	KIAA0092 gene product
		U39226	myosin VIIA (Usher syndrome 1B (autosomal recessive, severe
		U53204	plectin 1, intermediate filament binding protein, 500kD
		D17530	drebrin 1
		X53416	filamin A, alpha (actin binding protein 280)
		AA284298	myosin, light polypeptide 5, regulatory
		X04412	gelsolin (amyloidosis, Finnish type)
		Z20656	myosin, heavy polypeptide 6, cardiac muscle, alpha (cardiomyo
		AL050396	filamin A, alpha (actin binding protein 280)
		AJ011712	troponin T1, skeletal, slow
		AF006087	actin related protein 2/3 complex, subunit 4 (20 kD)
		J03191	profilin 1
		AF006084	actin related protein 2/3 complex, subunit 1B (41 kD)
		M35093	mucin 1, transmembrane
		U42391	myosin IXB
		X15804	actinin, alpha 1
		M94345	capping protein (actin filament), gelsolin-like
		X70326	macrophage myristoylated alanine-rich C kinase substrate
		J05500	spectrin, beta, erythrocytic (includes spherocytosis, clinical type
		M94547	likely ortholog of mouse myosin light chain, regulatory A
		B.7.5.3.0 Intermediate filaments and associated proteins	
		NM_005573	lamin B1
		Y00503	keratin 19
		M26326	keratin 18
		J00124	keratin 14 (epidermolysis bullosa simplex, Dowling-Meara, Koeb
		Y16790	keratin, hair, acidic, 4
		X86570	keratin, hair, acidic, 1
		Z29074	keratin 9 (epidermolytic palmoplantar keratoderma)
		M76482	desmoglein 3 (pemphigus vulgaris antigen)
		AF012023	integrin cytoplasmic domain-associated protein 1
		AF012024	integrin cytoplasmic domain-associated protein 1
		X05608	neurofilament, light polypeptide (68kD)
		B.7.5.4.0 Cytoskeleton-membrane anchors	
		XM_009975	galanin receptor 3
		AF022728	dystrobrevin, beta
		M94151	catenin (cadherin-associated protein), alpha 2
		L11353	neurofibromin 2 (bilateral acoustic neuroma)
		X53416	filamin A, alpha (actin binding protein 280)
		R24802	dystrobrevin, alpha
		M76482	desmoglein 3 (pemphigus vulgaris antigen)
		AL050396	filamin A, alpha (actin binding protein 280)

## E6E7\_pLC Function Hierarchy

		AA010701	catenin (cadherin-associated protein), alpha 1 (102kD)	-2.08
		AF082559	tankyrase, TRF1-interacting ankyrin-related ADP-ribose polymerase	-2.00
		J05500	spectrin, beta, erythrocytic (includes spherocytosis, clinical type)	-1.34
	B.7.5.5.0	Motor proteins		
	B.7.5.5.1	Myosin-related		
		D42054	KIAA0092 gene product	2.70
		U39226	myosin VIIA (Usher syndrome 1B (autosomal recessive, severe)	2.55
		AA284298	myosin, light polypeptide 5, regulatory	-3.25
		Z20656	myosin, heavy polypeptide 6, cardiac muscle, alpha (cardiomyopathy)	-2.33
		U42391	myosin IXB	-1.95
		M94547	likely ortholog of mouse myosin light chain, regulatory A	-1.33
	B.7.5.5.2	Dynein-related		
		AL031737	dynein, cytoplasmic, light polypeptide 1	-1.99
	B.7.5.5.3	Kinesin-related		
		U37426	kinesin-like 1	3.25
		D14678	kinesin-like 2	3.21
		D14678	kinesin-like 2	2.97
		U63743	kinesin-like 6 (mitotic centromere-associated kinesin)	2.61
		Z15005	centromere protein E (312kD)	2.61
		Y08319	kinesin heavy chain member 2	1.90
		AB002357	kinesin family member 3B	-1.21
	B.7.5.5.4	Dynamin-related		
		M33882	myxovirus (influenza virus) resistance 1, interferon-inducible protein	-2.30
	B.7.5.99.0	Other cytoskeleton		
		M64572	protein tyrosine phosphatase, non-receptor type 3	4.82
		Z24727	tropomyosin 1 (alpha)	1.97
		L19711	dystroglycan 1 (dystrophin-associated glycoprotein 1)	1.97
		AI052518	crystallin, gamma A	-2.88
		X56807	desmocollin 2	-2.86
		U05569	crystallin, alpha A	-2.08
		X05276	tropomyosin 4	-2.06
		M12125	tropomyosin 2 (beta)	-1.89
		Z46967	calicin	-1.64
	B.7.6.0.0	Ribosome		
	B.7.6.1.0	Small subunit		
		BE407202	mitochondrial ribosomal protein S12	-3.16
		X65923	Finkel-Biskis-Reilly murine sarcoma virus (FBR-MuSV) ubiquitin	-1.99
		AA013087	ribosomal protein S13	-1.51
	B.7.6.2.0	Large subunit		
		X69392	ribosomal protein L26	11.91
		X55954	ribosomal protein L23	-1.91
	B.7.7.0.0	Chromatin		
	B.7.7.1.0	Histone and histone-like		
		AI189287	H1 histone family, member 2	22.63
		AI039144	H2A histone family, member A	4.76
		AI885852	H2A histone family, member O	4.44
		U75679	stem-loop (histone) binding protein	3.60
		AL049324	histone H2A.F/Z variant	3.18
		AA255502	H4 histone family, member G	2.88
		AI656903	H3 histone family, member K	2.47
		AJ223352	histone family member	2.34
		AW007731	histone H2A.F/Z variant	2.33
		AI076718	H2B histone family, member R	1.85
		L19779	H2A histone family, member O	1.76
		X03473	H1 histone family, member 0	-2.69

## E6E7\_pLC Function Hierarchy

		AJ223353	H2B histone family, member B	-2.65
		X03473	H1 histone family, member 0	-2.31
	B.7.7.2.0	High mobility group		
		X62534	high-mobility group (nonhistone chromosomal) protein 2	3.62
		X13546	high-mobility group (nonhistone chromosomal) protein 17	1.96
		Y10043	high-mobility group (nonhistone chromosomal) protein 4	1.26
	B.7.7.3.0	Centromere-associated		
		D79988	kinetochore associated 1	4.05
		U63743	kinesin-like 6 (mitotic centromere-associated kinesin)	2.61
		Z15005	centromere protein E (312kD)	2.61
		U14518	centromere protein A (17kD)	2.30
	B.7.7.99.0	Other chromatin		
		AF092563	SMC2 structural maintenance of chromosomes 2-like 1 (yeast)	3.22
		U20979	chromatin assembly factor 1, subunit A (p150)	2.61
		X74262	retinoblastoma binding protein 4	2.53
		M86667	nucleosome assembly protein 1-like 1	2.20
		M86667	nucleosome assembly protein 1-like 1	2.00
	B.7.8.0.0	Organelle		
	B.7.8.1.0	Nucleus		
		AI189287	H1 histone family, member 2	22.63
		AF091433	cyclin E2	12.82
		S75174	E2F transcription factor 4, p107/p130-binding	11.44
		L31881	nuclear factor I/X (CCAAT-binding transcription factor)	11.35
		BF185128	proliferating cell nuclear antigen	10.84
		M74093	cyclin E1	8.34
		M15796	proliferating cell nuclear antigen	6.84
		AF023203	homeobox protein Og12 (OGL12) mRNA, partial cds	6.58
		Y11284	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog)	6.29
		U03911	mutS homolog 2, colon cancer, nonpolyposis type 1 (E. coli)	6.08
		D26018	polymerase (DNA directed), delta 3	6.04
		AL080146	cyclin B2	5.89
		U61145	enhancer of zeste homolog 2 (Drosophila)	5.74
		M77810	hypothetical protein MGC2306	5.56
		AF025840	polymerase (DNA directed), epsilon 2	5.41
		U26727	cyclin-dependent kinase inhibitor 2A (melanoma, p16, inhibits C	5.35
		L25876	cyclin-dependent kinase inhibitor 3 (CDK2-associated dual spe	5.33
		U21090	polymerase (DNA directed), delta 2, regulatory subunit (50kD)	5.23
		M87339	replication factor C (activator 1) 4 (37kD)	5.05
		M25753	cyclin B1	4.80
		AI039144	H2A histone family, member A	4.76
		U73328	distal-less homeobox 4	4.64
		AI885852	H2A histone family, member O	4.44
		AJ236876	ADP-ribosyltransferase (NAD+; poly(ADP-ribose) polymerase)-I	4.42
		L11672	zinc finger protein 91 (HPF7, HTF10)	4.28
		L23959	transcription factor Dp-1	4.25
		X85133	retinoblastoma binding protein 6	4.20
		U03911	mutS homolog 2, colon cancer, nonpolyposis type 1 (E. coli)	4.17
		AF026402	prp28, U5 snRNP 100 kd protein	4.17
		W28479	transcription factor Dp-1	4.14
		AB021868	protein inhibitor of activated STAT3	4.14
		D88357	cell division cycle 2, G1 to S and G2 to M	4.07
		U28946	mutS homolog 6 (E. coli)	3.91
		U43189	E74-like factor 2 (ets domain transcription factor)	3.90
		D38073	MCM3 minichromosome maintenance deficient 3 (S. cerevisiae)	3.88
		M25753	cyclin B1	3.88

## E6E7\_pLC Function Hierarchy

		M91585	bromodomain and PHD finger containing, 1	3.70
		M87338	replication factor C (activator 1) 2 (40kD)	3.69
		AL080203	polymerase (DNA directed), epsilon	3.67
		X62534	high-mobility group (nonhistone chromosomal) protein 2	3.62
		AB018334	nucleoporin 155kD	3.61
		U75679	stem-loop (histone) binding protein	3.60
		M87339	replication factor C (activator 1) 4 (37kD)	3.56
		X06745	polymerase (DNA directed), alpha	3.49
		X63692	DNA (cytosine-5-)methyltransferase 1	3.48
		X05360	cell division cycle 2, G1 to S and G2 to M	3.26
		U13695	PMS1 postmeiotic segregation increased 1 ( <i>S. cerevisiae</i> )	3.21
		NM_005573	lamin B1	3.21
		AL049324	histone H2A.F/Z variant	3.18
		X64229	DEK oncogene (DNA binding)	3.18
		D21063	MCM2 minichromosome maintenance deficient 2, mitotin ( <i>S. ce</i>	3.18
		D12765	ets variant gene 4 (E1A enhancer binding protein, E1AF)	3.17
		U91616	nuclear factor of kappa light polypeptide gene enhancer in B-ce	3.13
		AI375913	topoisomerase (DNA) II alpha (170kD)	3.13
		AF084513	RAD1 homolog ( <i>S. pombe</i> )	3.06
		L04282	zinc finger protein 148 (pHZ-52)	3.04
		AA478904	Kruppel-like factor 7 (ubiquitous)	3.01
		L07541	replication factor C (activator 1) 3 (38kD)	3.01
		M63488	replication protein A1 (70kD)	2.99
		AW021542	sin3-associated polypeptide, 18kD	2.98
		M97856	nuclear autoantigenic sperm protein (histone-binding)	2.93
		X74330	primase, polypeptide 1 (49kD)	2.92
		D26362	bromodomain containing 3	2.91
		L29217	CDC-like kinase 3	2.91
		D55716	MCM7 minichromosome maintenance deficient 7 ( <i>S. cerevisiae</i> )	2.90
		M73812	cyclin E1	2.88
		AA255502	H4 histone family, member G	2.88
		L29219	CDC-like kinase 1	2.87
		U76421	adenosine deaminase, RNA-specific, B1 (RED1 homolog rat)	2.86
		AI304854	cyclin-dependent kinase inhibitor 1B (p27, Kip1)	2.83
		X16155	nuclear receptor subfamily 2, group F, member 1	2.83
		AI635895	delta sleep inducing peptide, immunoreactor	2.82
		U90426	nuclear RNA helicase, DECD variant of DEAD box family	2.80
		X74331	primase, polypeptide 2A (58kD)	2.77
		AA595596	ADP-ribosyltransferase (NAD+; poly(ADP-ribose) polymerase)-	2.76
		U13695	PMS1 postmeiotic segregation increased 1 ( <i>S. cerevisiae</i> )	2.68
		Y13467	PPAR binding protein	2.67
		D38550	E2F transcription factor 3	2.65
		L22009	heterogeneous nuclear ribonucleoprotein H1 (H)	2.64
		W27466	heterogeneous nuclear ribonucleoprotein D-like	2.63
		U07418	mutL homolog 1, colon cancer, nonpolyposis type 2 ( <i>E. coli</i> )	2.62
		L41067	nuclear factor of activated T-cells, cytoplasmic, calcineurin-depe	2.62
		U20979	chromatin assembly factor 1, subunit A (p150)	2.61
		U63743	kinesin-like 6 (mitotic centromere-associated kinesin)	2.61
		Z15005	centromere protein E (312kD)	2.61
		U31930	dUTP pyrophosphatase	2.60
		U74612	forkhead box M1	2.59
		AB006532	RecQ protein-like 4	2.59
		X74262	retinoblastoma binding protein 4	2.53
		M63488	replication protein A1 (70kD)	2.50
		M29960	nuclear receptor subfamily 2, group C, member 1	2.49

## E6E7\_pLC Function Hierarchy

			AI656903	H3 histone family, member K	2.47
			AB028449	Dicer1, Dcr-1 homolog (Drosophila)	2.45
			U85658	transcription factor AP-2 gamma (activating enhancer binding protein)	2.42
			U38904	zinc finger protein 211	2.41
			S63912	heterogeneous nuclear ribonucleoprotein A3	2.38
			X16666	homeo box B1	2.37
			AF041381	E2F transcription factor 6	2.36
			D26121	splicing factor 1, alternatively spliced product, complete cds	2.35
			M65217	heat shock transcription factor 2	2.34
			AJ223352	histone family member	2.34
			AW007731	histone H2A.F/Z variant	2.33
			U14518	centromere protein A (17kD)	2.30
			AF038177	FOXJ2 forkhead factor	2.29
			L11672	zinc finger protein 91 (HPF7, HTF10)	2.27
			X65550	antigen identified by monoclonal antibody Ki-67	2.27
			W28483	heterogeneous nuclear ribonucleoprotein H1 (H)	2.27
			U78722	zinc finger protein 165	2.26
			S78825	inhibitor of DNA binding 1, dominant negative helix-loop-helix protein	2.26
			L07540	replication factor C (activator 1) 5 (36.5kD)	2.25
			AJ236876	ADP-ribosyltransferase (NAD+; poly(ADP-ribose) polymerase)-like	2.23
			AI184802	PRP4/STK/WD splicing factor	2.22
			L36140	RecQ protein-like (DNA helicase Q1-like)	2.20
			X70991	NGFI-A binding protein 2 (EGR1 binding protein 2)	2.20
			AF030424	histone acetyltransferase 1	2.20
			M86667	nucleosome assembly protein 1-like 1	2.20
			AL050366	O-linked N-acetylglucosamine (GlcNAc) transferase (UDP-N-acetylglucosamine:polypeptide N-acetylglycosidase)	2.20
			AL022097	heterogeneous nuclear ribonucleoprotein A1	2.17
			U37689	polymerase (RNA) II (DNA directed) polypeptide H	2.17
			D50487	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 8 (RNA helicase 8)	2.15
			L13773	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog)	2.15
			M29960	nuclear receptor subfamily 2, group C, member 1	2.12
			M30938	X-ray repair complementing defective repair in Chinese hamster ovary cells 38	2.11
			AF029669	RAD51 homolog C (S. cerevisiae)	2.11
			S66431	retinoblastoma binding protein 2	2.10
			AF044288	aryl hydrocarbon receptor nuclear translocator-like	2.10
			AF052131	heterogeneous nuclear ribonucleoprotein H3 (2H9)	2.09
			AL561834	topoisomerase (DNA) II alpha (170kD)	2.09
			AA176264	small nuclear ribonucleoprotein polypeptide A	2.08
			M29580	zinc finger protein 7 (KOX 4, clone HF.16)	2.08
			AF054180	zinc finger protein 254	2.07
			M95925	neural retina leucine zipper	2.05
			D13891	inhibitor of DNA binding 2, dominant negative helix-loop-helix protein	2.04
			AW274275	SWI/SNF related, matrix associated, actin dependent regulator	2.01
			U13695	PMS1 postmeiotic segregation increased 1 (S. cerevisiae)	2.00
			M86667	nucleosome assembly protein 1-like 1	2.00
			X51417	estrogen-related receptor beta	1.99
			X51688	cyclin A2	1.97
			L41067	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 1	1.97
			X13546	high-mobility group (nonhistone chromosomal) protein 17	1.96
			L07493	replication protein A3 (14kD)	1.96
			U07804	topoisomerase (DNA) I	1.95
			U25435	CCCTC-binding factor (zinc finger protein)	1.95
			X84740	ligase III, DNA, ATP-dependent	1.94
			L28010	heterogeneous nuclear ribonucleoprotein F	1.94
			M69043	nuclear factor of kappa light polypeptide gene enhancer in B-cells 43	1.90

## E6E7\_pLC Function Hierarchy

		X54942	CDC28 protein kinase 2	1.89
		AB002803	BTB and CNC homology 1, basic leucine zipper transcription factor	1.89
		AJ007042	Wolf-Hirschhorn syndrome candidate 1	1.88
		AF045451	NGFI-A binding protein 1 (EGR1 binding protein 1)	1.87
		AW577177	heterogeneous nuclear ribonucleoprotein A3	1.86
		U37689	polymerase (RNA) II (DNA directed) polypeptide H	1.86
		AI076718	H2B histone family, member R	1.85
		J04076	early growth response 2 (Krox-20 homolog, Drosophila)	1.83
		U68019	MAD, mothers against decapentaplegic homolog 3 (Drosophila)	1.83
		M58603	nuclear factor of kappa light polypeptide gene enhancer in B-cell	1.83
		X66975	polypyrimidine tract binding protein 1	1.81
		AF126008	lymphoid blast crisis oncogene	1.81
		L23959	transcription factor Dp-1	1.79
		D79983	likely ortholog of mouse ubiquitin conjugating enzyme 7 interacting protein	1.76
		L19779	H2A histone family, member O	1.76
		M81601	transcription elongation factor A (SII), 1	1.75
		S68134	Homo sapiens, Similar to cAMP responsive element modulator, 1	1.74
		AF060503	zinc finger protein	1.73
		L04282	zinc finger protein 148 (pHZ-52)	1.66
		NM_005995	T-box 10 (TBX10) mRNA.	1.66
		AF040963	Mad4 homolog	1.61
		AF001359	mutL homolog 1, colon cancer, nonpolyposis type 2 (E. coli)	1.54
		S67777	Estrogen receptor (exon 6) [human, tamoxifen-resistant breast tumor]	1.53
		AL039458	ortholog of mouse integral membrane glycoprotein LIG-1	1.53
		Z29066	NIMA (never in mitosis gene a)-related kinase 2	1.51
		AL080125	zinc finger protein 20 (KOX 13)	1.48
		AB007872	zinc finger protein 264	1.47
		L76937	Werner syndrome	1.46
		L22342	SP110 nuclear body protein	1.45
		U38480	retinoid X receptor, gamma	1.43
		U14658	PMS2 postmeiotic segregation increased 2 (S. cerevisiae)	1.37
		Z35278	runt-related transcription factor 3	1.36
		U27459	origin recognition complex, subunit 2-like (yeast)	1.34
		U71598	zinc finger protein 274	1.28
		U11732	ets variant gene 6 (TEL oncogene)	1.28
		Y10043	high-mobility group (nonhistone chromosomal) protein 4	1.26
		M93119	insulinoma-associated 1	1.18
		AF016898	basic leucine zipper transcription factor, ATF-like	1.08
		X74143	forkhead box G1A	-22.65
		L21990	splicing factor 3a, subunit 2, 66kD	-16.00
		U41843	DR1-associated protein 1 (negative cofactor 2 alpha)	-14.77
		M29039	jun B proto-oncogene	-8.15
		L12060	retinoic acid receptor, gamma	-3.75
		U72882	interferon-induced protein 35	-3.57
		AJ131186	nuclear matrix protein NMP200 related to splicing factor PRP19	-3.53
		M74905	N-methylpurine-DNA glycosylase	-3.34
		AF043244	nucleolar protein 3 (apoptosis repressor with CARD domain)	-3.19
		U07132	nuclear receptor subfamily 1, group H, member 2	-2.98
		U61836	chromosome 20 open reading frame 16	-2.80
		AF010601	MAD, mothers against decapentaplegic homolog 5 (Drosophila)	-2.76
		X17360	homeo box D4	-2.75
		X55504	nucleolar protein 1 (120kD)	-2.74
		X03473	H1 histone family, member 0	-2.69
		X07315	nuclear transport factor 2 (placental protein 15)	-2.68
		AJ223353	H2B histone family, member B	-2.65

## E6E7\_pLC Function Hierarchy

			U33838	RELA V-rel reticuloendotheliosis viral oncogene homolog A, nucleic acid binding protein	-2.63
			X52221	excision repair cross-complementing rodent repair deficiency, complementing group C	-2.61
			AI793265	achaete-scute complex-like 1 (Drosophila)	-2.59
			M68891	hypothetical protein MGC2306	-2.57
			L49169	FBX murine osteosarcoma viral oncogene homolog B	-2.57
			X90978	runt-related transcription factor 1 (acute myeloid leukemia 1; amylase)	-2.55
			AI991531	TGFB inducible early growth response 2	-2.55
			S75174	E2F transcription factor 4, p107/p130-binding	-2.50
			M25269	ELK1, member of ETS oncogene family	-2.46
			X80343	cyclin-dependent kinase 5, regulatory subunit 1 (p35)	-2.46
			L41066	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 1	-2.44
			M99438	transducin-like enhancer of split 3 (E(sp1) homolog, Drosophila)	-2.40
			Z49825	hepatocyte nuclear factor 4, alpha	-2.36
			U78313	MyoD family inhibitor	-2.36
			X03473	H1 histone family, member 0	-2.31
			AI991631	bromodomain-containing 4	-2.30
			X16576	zinc finger protein 46 (KUP)	-2.28
			L13740	nuclear receptor subfamily 4, group A, member 1	-2.24
			M14745	B-cell CLL/lymphoma 2	-2.22
			U76388	nuclear receptor subfamily 5, group A, member 1	-2.20
			M24900	nuclear receptor subfamily 1, group D, member 1	-2.15
			M97936	signal transducer and activator of transcription 1, 91kD	-2.14
			Z11773	zinc finger protein 187	-2.13
			U61836	chromosome 20 open reading frame 16	-2.13
			U13991	TAF10 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 30kD	-2.10
			X07384	glioma-associated oncogene homolog (zinc finger protein)	-2.10
			M87284	2'-5'-oligoadenylate synthetase 2 (69-71 kD)	-2.09
			M62800	Sjogren syndrome antigen A1 (52kD, ribonucleoprotein autoantigen)	-2.09
			U16028	activating transcription factor 2	-2.08
			Z49995	homeo box D1	-2.06
			D85131	MYC-associated zinc finger protein (purine-binding transcription factor)	-2.06
			XM_008679	tumor protein p53 (Li-Fraumeni syndrome)	-2.06
			NM_000517	hemoglobin, alpha 1	-2.04
			X73066	non-metastatic cells 1, protein (NM23A) expressed in	-2.03
			AI087268	small nuclear ribonucleoprotein polypeptide C	-2.03
			U59913	MAD, mothers against decapentaplegic homolog 5 (Drosophila)	-2.02
			M97936	signal transducer and activator of transcription 1, 91kD	-1.99
			M13194	excision repair cross-complementing rodent repair deficiency, complementing group A	-1.97
			L35013	splicing factor 3b, subunit 4, 49kD	-1.97
			M24069	cold shock domain protein A	-1.89
			L29277	signal transducer and activator of transcription 3 (acute-phase response)	-1.89
			AB008913	paired box gene 4	-1.89
			X83928	TAF11 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 110kD	-1.88
			X65233	zinc finger protein 80 (pT17)	-1.88
			M94345	capping protein (actin filament), gelsolin-like	-1.88
			M16938	homeo box C6	-1.86
			AJ133115	TSC-22-like	-1.84
			J03407	ret finger protein	-1.82
			AB011414	Kruppel-type zinc finger (C2H2)	-1.79
			S68134	Homo sapiens, Similar to cAMP responsive element modulator, 1	-1.77
			AF010193	MAD, mothers against decapentaplegic homolog 7 (Drosophila)	-1.75
			AF017418	Meis1, myeloid ecotropic viral integration site 1 homolog 2 (mouse)	-1.74
			D30758	centaurin, beta 1	-1.74
			U65404	Kruppel-like factor 1 (erythroid)	-1.73
			NM_014360	NK-2 (Drosophila) homolog 8	-1.69

## E6E7\_pLC Function Hierarchy

		Z46967	calicin	-1.64
		X90976	runt-related transcription factor 1 (acute myeloid leukemia 1; am	-1.52
		X89894	nuclear receptor subfamily 4, group A, member 3	-1.51
		U18671	signal transducer and activator of transcription 2, 113kD	-1.50
		W28870	Kruppel-like factor 4 (gut)	-1.42
		AI885749	homeo box A10	-1.38
		AC002086	Kaiso	-1.34
		U36501	nuclear antigen Sp100	-1.31
		S71020	ESTs	-1.22
	B.7.8.2.0	Nucleolus		
		X65550	antigen identified by monoclonal antibody Ki-67	2.27
		X66113	polymyositis/scleroderma autoantigen 2 (100kD)	2.11
		Y12065	nucleolar protein 5A (56kD with KKE/D repeat)	2.11
		L76937	Werner syndrome	1.46
		U41387	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 21	-3.53
		X55504	nucleolar protein 1 (120kD)	-2.74
		H82458	nucleolar cysteine-rich protein	-1.83
	B.7.8.3.0	Endoplasmic reticulum		
		D50840	UDP-glucose ceramide glucosyltransferase	2.86
		U84573	procollagen-lysine, 2-oxoglutarate 5-dioxygenase (lysine hydroxylase)	2.83
		Z37986	emopamil binding protein (sterol isomerase)	1.78
		D83174	serine (or cysteine) proteinase inhibitor, clade H (heat shock protein)	-3.44
		M63573	peptidylprolyl isomerase B (cyclophilin B)	-3.36
		M26856	cytochrome P450, subfamily XXIA (steroid 21-hydroxylase, constitutive)	-2.65
		M61854	cytochrome P450, subfamily IIC (mephenytoin 4-hydroxylase), p	-2.29
		M14745	B-cell CLL/lymphoma 2	-2.22
		X02612	cytochrome P450, subfamily I (aromatic compound-inducible), p	-1.97
		Y00281	ribophorin I	-1.96
	B.7.8.4.0	Golgi		
		M57763	ADP-ribosylation factor 6	2.37
		L06147	golgi autoantigen, golgin subfamily a, 2	-3.11
		X17094	paired basic amino acid cleaving enzyme (furin, membrane ass	-2.59
	B.7.8.5.0	Vacuole		
		J05682	ATPase, H <sup>+</sup> transporting, lysosomal (vacuolar proton pump) 42	2.07
		X71490	ATPase, H <sup>+</sup> transporting, lysosomal (vacuolar proton pump), m	-2.48
		M62762	ATPase, H <sup>+</sup> transporting, lysosomal (vacuolar proton pump) 16	-2.08
	B.7.8.6.0	Lysosome		
		AB002390	lysosomal apyrase-like 1	3.93
		NM_000203	iduronidase, alpha-L-	3.35
		U51240	Lysosomal-associated multispanning membrane protein-5	1.98
		M29877	fucosidase, alpha-L- 1, tissue	1.75
		AA112483	galactosamine (N-acetyl)-6-sulfate sulfatase (Morquio syndrome)	1.65
		L22569	cathepsin B	1.44
	B.7.8.7.0	Endosome		
		X76220	mal, T-cell differentiation protein	-3.44
		U18420	RAB5C, member RAS oncogene family	-3.31
		M28215	RAB5A, member RAS oncogene family	-1.96
	B.7.8.8.0	Peroxisome		
		AF026086	peroxisome biogenesis factor 1	2.44
		AA194159	peroxisome biogenesis factor 10	2.33
		Y14318	ATP-binding cassette, sub-family D (ALD), member 4	1.76
		X53414	alanine-glyoxylate aminotransferase (oxalosis I; hyperoxaluria I)	-4.73
		AF060502	peroxisome biogenesis factor 10	-2.28
	B.7.8.10.0	Mitochondria		
		Z25821	dodecenoyl-Coenzyme A delta isomerase (3,2 trans-enoyl-Coen	6.40

## E6E7\_pLC Function Hierarchy

			W74442	polymerase (DNA directed), gamma	4.55
			U31930	dUTP pyrophosphatase	2.60
			AA856613	acyl-Coenzyme A dehydrogenase, C-4 to C-12 straight chain	2.51
			U75370	polymerase (RNA) mitochondrial (DNA directed)	2.07
			AF038195	BCS1-like (yeast)	2.06
			AF038195	BCS1-like (yeast)	2.06
			X83618	3-hydroxy-3-methylglutaryl-Coenzyme A synthase 2 (mitochondrial)	1.86
			X16396	methylene tetrahydrofolate dehydrogenase (NAD+ dependent), mitochondrial	1.82
			AW376361	solute carrier family 25 (mitochondrial carrier; adenine nucleotide transporter), member 1	-5.31
			X53414	alanine-glyoxylate aminotransferase (oxalosis I; hyperoxaluria I)	-4.73
			Z23115	BCL2-like 1	-3.80
			AI344343	hypothetical protein MGC10433	-3.46
			U08997	Glutamate dehydrogenase-2	-3.20
			BE407202	mitochondrial ribosomal protein S12	-3.16
			X63422	ATP synthase, H <sup>+</sup> transporting, mitochondrial F1 complex, delta subunit	-3.07
			U78678	thioredoxin 2	-2.40
			BE615085	ATP synthase, H <sup>+</sup> transporting, mitochondrial F1 complex, beta subunit	-2.26
			M14745	B-cell CLL/lymphoma 2	-2.22
			X60221	ATP synthase, H <sup>+</sup> transporting, mitochondrial F0 complex, subunit 9	-2.19
			U24267	aldehyde dehydrogenase 4 family, member A1	-2.15
			M87284	2'-5'-oligoadenylate synthetase 2 (69-71 kD)	-2.09
			X05409	aldehyde dehydrogenase 2 family (mitochondrial)	-1.87
			L16842	ubiquinol-cytochrome c reductase core protein I	-1.86
			U08997	Glutamate dehydrogenase-2	-1.86
			X55764	cytochrome P450, subfamily XIB (steroid 11-beta-hydroxylase), mitochondrial	-1.71
			AA152406	cytochrome c oxidase subunit VIIa polypeptide 1 (muscle)	-1.58
			X07834	superoxide dismutase 2, mitochondrial	-1.28