

## **Functional Annotation Chart**

Help and Manual

Current Gene List: condition\_specific\_gene\_list Current Background: Homo sapiens 2052 DAVID IDs

## **Options**

Reru	n Using Options	Create Sublist					
	chart records		II_	1 -	_		oad File
	Category	Term	RT Genes	Count	1		Benjamini
	UP_SEQ_FEATURE	CROSSLNK:Glycyl lysine isopeptide (Lys-Gly) (interchain with G-Cter in SUMO2)	RT	325	15.8	4.9E- 64	4.4E-60
	UP_SEQ_FEATURE	CROSSLNK:Glycyl lysine isopeptide (Lys-Gly) (interchain with G-Cter in SUMO2); alternate	RT ==	118	5.8	4.4E- 35	2.0E-31
	UP_SEQ_FEATURE	CROSSLNK:Glycyl lysine isopeptide (Lys-Gly) (interchain with G-Cter in SUMO1); alternate	RT =	70	3.4	9.9E- 25	2.9E-21
				67	2.2	2.0E-	4 FE 12
	UP_SEQ_FEATURE	DOMAIN: RRM	RT =	67	3.3	15	4.5E-12
	UP_SEQ_FEATURE	COMPBIAS: Basic residues	RT ==	135	6.6	1.8E- 14	3.3E-11
	UP_SEQ_FEATURE	COMPBIAS:Acidic residues	RT ===	167	8.1	9.9E- 13	1.5E-9
	LIP SEO FEATURE	COMPBIAS:Basic and acidic residues	RT	678	33 N	1.7E- 11	2.2E-8
	UP_SEQ_FEATURE	CROSSLNK:Glycyl lysine isopeptide (Lys-Gly) (interchain with G-Cter in ubiquitin)	RT	65	3.2	4.6E- 10	5.1E-7
	UP_SEQ_FEATURE	MOTIF: Nuclear localization signal	RT =	88	4.3	6.5E- 10	6.4E-7
	UP_SEQ_FEATURE	DOMAIN:RRM 1	RT 🖥	32	1.6	2.0E-8	1.6E-5
	UP_SEQ_FEATURE		RT =	32		2.0E-8	
		REGION: Disordered  DOMAIN: Immunoglobulin C1-set	RT RT	1431 11		3.3E-7 3.3E-7	
		LIPID:S-geranylgeranyl cysteine	RT	29		2.1E-6	
	UP_SEQ_FEATURE	CROSSLNK:Glycyl lysine isopeptide (Lys-Gly) (interchain with G-Cter in SUMO); alternate	RT	18	0.9	2.4E-6	1.4E-3
		CROSSLNK:Glycyl lysine isopeptide (Lys-Gly) (interchain with G-Cter in SUMO1)	RT	23	1.1	4.8E-6	2.7E-3
		TOPO_DOM:Lumenal	RT =	101		8.5E-6	
	UP_SEQ_FEATURE	-	RT 🖥	15		9.0E-6	
		DOMAIN Thioredoxin	RT	16		1.2E-5	
		DOMAIN:Ig-like C1-type MOTIF:Effector region	RT  RT	15 25		1.3E-5 1.6E-5	
		DOMAIN: Ubiquitin-like	RT	19		2.5E-5	
	UP_SEQ_FEATURE	CROSSLNK:Glycyl lysine isopeptide (Lys-Gly) (interchain with G-Cter in SUMO)	RT =	25		4.5E-5	
	UP_SEQ_FEATURE		RT RT	13 9		4.8E-5 4.9E-5	
	UP_SEQ_FEATURE UP_SEQ_FEATURE	•	RT	9		4.9E-5	
	UP_SEQ_FEATURE	DOMAIN:PCI	RT	11	0.5	6.0E-5	2.0E-2
	UP_SEQ_FEATURE		RT	7		1.2E-4	
		DOMAIN:DEAD-box RNA helicase Q REGION:Leucine-zipper	RT  RT	12 26		1.3E-4 1.4E-4	
		LIPID:Phosphatidylserine amidated glycine; alternate	RT	6		1.5E-4	
	UP_SEQ_FEATURE	LIPID:Phosphatidylethanolamine amidated glycine; alternate	RT	6	0.3	1.5E-4	4.2E-2
		REGION:Connecting peptide	RT	13		1.6E-4	
	UP_SEQ_FEATURE UP_SEO_FEATURE	DOMAIN:RRM 3 DOMAIN:PHD-type	RT  RT	15 19		2.5E-4 2.8E-4	
	UP_SEQ_FEATURE	**	RT	14		3.1E-4	
		DOMAIN:Helicase C-terminal	RT =	24		3.1E-4	
	UP_SEQ_FEATURE	DOMAIN:SAP DISULFID:Redox-active	RT	10 15	0.5	3.6E-4 3.9E-4	
	UP_SEQ_FEATURE		RT	8		4.1E-4	
	UP_SEQ_FEATURE	DOMAIN:RanBP2-type	RT	8	0.4	4.1E-4	9.0E-2
		REGION:Self-association	RT	7		4.6E-4	
	UP_SEQ_FEATURE UP_SEQ_FEATURE	DOMAIN:RING-type DOMAIN:bZIP	RT  RT	37 15		5.3E-4 5.9E-4	
		DOMAIN:Serine/threonine specific protein phosphatases	RT	7		7.8E-4	
	UP_SEQ_FEATURE	ZN_FING:C4-type	RT	16	0.8	8.2E-4	1.6E-1
		MOTIF: Prevents secretion from ER	RT	15		8.7E-4	
	UP_SEQ_FEATURE	TRANSIT: Mitochondrion REPEAT: 1-3	RT =	78 8		9.6E-4 9.7E-4	
		DOMAIN: Helicase ATP-binding	RT	24		9.9E-4	
	UP_SEQ_FEATURE		RT =	42		1.0E-3	
	UP_SEQ_FEATURE	DOMAIN: DUSP MOTIF: MIT-interacting motif	RT .	5 5		1.1E-3 1.1E-3	
		ZN_FING:C3H1-type	RT	15		1.5E-3	
	UP_SEQ_FEATURE	REPEAT:WD	RT =	36	1.8	1.6E-3	2.6E-1
	UP_SEQ_FEATURE		<u>RT</u>	42		1.7E-3	
	UP_SEQ_FEATURE UP_SEQ_FEATURE		RT .	9 7		1.8E-3 1.9E-3	
	UP_SEQ_FEATURE		RT	42	2.0	2.1E-3	
		REGION:Basic motif	RT	14		2.3E-3	
	UP_SEQ_FEATURE		RT	6		2.4E-3	
	-	TOPO_DOM:Mitochondrial intermembrane  DOMAIN:STAT transcription factor protein interaction	RT  RT	26 5		2.4E-3 2.4E-3	
		SITE:Cleavage; by ATG4B	RT	5		2.4E-3	
	UP_SEQ_FEATURE		RT =	42		2.4E-3	
	UP_SEQ_FEATURE	REPEAT: 1-1 ZN_FING: PHD-type	RT .	9 13		2.4E-3 2.5E-3	
	-	REGION:Interaction with Elongin BC complex	RT	4		3.4E-3	
		REGION:Interaction with VTA1	RT	4		3.4E-3	
	-	COMPBIAS:Polar residues  CARBOHYD:(Microbial infection) N-beta-linked (GlcNAc) arginine	RT PT	725 6		3.7E-3 3.8E-3	
	UF_SEV_FEATURE	רייניסטומי וווופכנוטוו) וא־טפנמ־וווווגפע (Gicinac) arginine	RT	6	0.3	J.0E-3	→./E-I

	0 ,	Term	RT Genes	Count			Benjamini
_		DOMAIN:TNFR-Cys	RT RT			4.0E-3	
	UP_SEQ_FEATURE UP_SEQ_FEATURE		RT =	42 42		4.1E-3 4.1E-3	
		TOPO_DOM:Mitochondrial matrix	RT	19		4.7E-3	
_	UP_SEQ_FEATURE		RT	19		6.5E-3	
	UP_SEQ_FEATURE	MOTIF:Cx9C motif 1	RT	7	0.3	7.4E-3	8.2E-1
	UP_SEQ_FEATURE	ZN_FING:RanBP2-type	RT	7	0.3	7.4E-3	8.2E-1
	UP_SEQ_FEATURE	MOTIF:Cx9C motif 2	RT	7	0.3	7.4E-3	8.2E-1
_	UP_SEQ_FEATURE	REPEAT:WD 7	RT	32	1.6	7.4E-3	8.2E-1
_	UP_SEQ_FEATURE	MUTAGEN:K->R: No effect on sumoylation.	RT	5	0.2	7.4E-3	8.2E-1
		ZN_FING:PHD-type 2	<u>RT</u>	10		7.6E-3	
		DOMAIN: MHC class II alpha chain N-terminal	RT	4		7.8E-3	
	UP_SEQ_FEATURE		RT	8		8.0E-3	
_		REPEAT:TNFR-Cys 2 REPEAT:TNFR-Cys 1	RT	8		8.0E-3 8.0E-3	
		DOMAIN:C3H1-type	RT RT	12		8.6E-3	
		ZN_FING:PHD-type 1	RT	10		1.1E-2	
		TRANSMEM:Helical; Anchor for type IV membrane protein	RT	14		1.1E-2	
	UP_SEQ_FEATURE	*	RT	5		1.1E-2	
	UP_SEQ_FEATURE	DOMAIN:CXXC-type	RT	5	0.2	1.1E-2	1.0E0
	UP_SEQ_FEATURE	DOMAIN:Ribosomal protein eL8/eL30/eS12/Gadd45	RT	5	0.2	1.1E-2	1.0E0
	UP_SEQ_FEATURE	UNSURE:I or L	RT	5	0.2	1.1E-2	1.0E0
_	UP_SEQ_FEATURE	ZN_FING:RING-type	RT	33	1.6	1.2E-2	1.0E0
_	UP_SEQ_FEATURE	REPEAT: 2-2	RT	8	0.4	1.2E-2	1.0E0
_		DOMAIN:Tudor-knot	RT	4		1.5E-2	
	UP_SEQ_FEATURE		RT	4		1.5E-2	
		SITE:Cleavage; by CASP8	RT RT	4		1.5E-2 1.5E-2	
	UP_SEQ_FEATURE UP_SEQ_FEATURE		RT	10		1.5E-2	
		ZN_FING:CXXC-type	RT	5		1.7E-2	
		MOTIF:Di-lysine motif	RT	6		2.0E-2	
		REPEAT:TNFR-Cys 3	RT	7		2.0E-2	
	UP_SEQ_FEATURE	·	RT	7		2.0E-2	
	UP_SEQ_FEATURE	DOMAIN:v-SNARE coiled-coil homology	RT	5	0.2	2.3E-2	1.0E0
	UP_SEQ_FEATURE	DOMAIN:V-SNARE coiled-coil homology	RT	5	0.2	2.3E-2	1.0E0
_	UP_SEQ_FEATURE	REPEAT:Spectrin 15	RT	5	0.2	2.3E-2	1.0E0
_	UP_SEQ_FEATURE	REGION: Membrane-binding amphipathic helix	RT	5	0.2	2.3E-2	1.0E0
_		REPEAT: Spectrin 17	<u>RT</u>	5		2.3E-2	
_		REPEAT:Spectrin 16	RT	5		2.3E-2	
_	UP_SEQ_FEATURE	· ·	RT	4		2.4E-2	
	UP_SEQ_FEATURE		RT	4		2.4E-2	
	UP_SEQ_FEATURE	SITE:Contributes to redox potential value	RT RT	4		2.4E-2 2.4E-2	
	UP_SEQ_FEATURE		RT	4		2.4E-2	
	UP_SEQ_FEATURE		RT	6		2.5E-2	
		REGION:Interaction with VPS4B	RT	3		2.6E-2	
		REGION:Interaction with IST1	RT			2.6E-2	
	UP_SEQ_FEATURE	DOMAIN: CCHC NOA-type	RT	3		2.6E-2	
	UP_SEQ_FEATURE	REGION:Interaction with MYO6	RT	3	0.1	2.6E-2	1.0E0
	UP_SEQ_FEATURE	DOMAIN:MHC class I alpha chain C-terminal	RT	3	0.1	2.6E-2	1.0E0
	UP_SEQ_FEATURE	DOMAIN:BAT2 N-terminal	RT	3	0.1	2.6E-2	1.0E0
	UP_SEQ_FEATURE	ZN_FING:CCHC NOA-type	<u>RT</u>	3		2.6E-2	
_		BINDING:in other chain	RT	10		2.7E-2	
		LIPID:N-myristoyl glycine	RT	29		2.9E-2	
_	UP_SEQ_FEATURE	PROPEP:Removed in mature form	RT RT			2.9E-2 3.0E-2	
	UP_SEQ_FEATURE		RT			3.1E-2	
	UP_SEQ_FEATURE		RT	18		3.1E-2	
		REPEAT:Spectrin 12	RT	5		3.1E-2	
		REPEAT: Spectrin 10	RT	5	0.2	3.1E-2	1.0E0
	UP SEO FEATURE	CROSSLNK:Glycyl lysine isopeptide (Gly-Lys) (interchain with K-? in acceptor proteins)	RT	5	0.2	3.1E-2	1.0E0
		proteinsy					
		REPEAT:Spectrin 14 REPEAT:Spectrin 11	RT RT	5 5		3.1E-2 3.1E-2	
		REPEAT: Spectrin 13	RT	5		3.1E-2 3.1E-2	
		REPEAT:Spectrin 19	RT	4		3.5E-2	
		REPEAT: Spectrin 18	RT	4		3.5E-2	
	UP_SEQ_FEATURE		RT	4		3.5E-2	
	UP_SEQ_FEATURE	REPEAT:Spectrin 20	RT	4	0.2	3.5E-2	1.0E0
_	UP_SEQ_FEATURE	ACT_SITE:Proton acceptor	RT =	102	5.0	3.6E-2	1.0E0
	UP_SEQ_FEATURE		RT	6		3.8E-2	
	UP_SEQ_FEATURE		RT			4.0E-2	
_	UP_SEQ_FEATURE	·	RT	5		4.0E-2	
	UP_SEQ_FEATURE	·	RT	5		4.0E-2	
	UP_SEQ_FEATURE UP_SEQ_FEATURE	ZN_FING:Matrin-type DOMAIN:WW	RT RT	5 10		4.0E-2 4.4E-2	
	UP_SEQ_FEATURE		RT =	30		4.4E-2 4.7E-2	
_	UP_SEQ_FEATURE		RT	4		4.7E-2 4.9E-2	
_	UP_SEQ_FEATURE		RT	4		4.9E-2	
		MOTIF:PxVxL motif	RT	4		4.9E-2	
_	UP_SEQ_FEATURE	DOMAIN:NTF2	RT	4	0.2	4.9E-2	1.0E0
	UP_SEQ_FEATURE	DOMAIN:MRG	RT	3		4.9E-2	
		REGION:Interaction with RNA	RT	3	0.1	4.9E-2	1.0E0
	UP_SEQ_FEATURE	CARBOHYD:(Microbial infection) O-alpha-linked (GlcNAc) threonine; by C.novyi toxin TcdA; alternate	RT	3	0.1	4.9E-2	1.0E0
		REGION:Interaction with ESR1	RT	3	0.1	4.9E-2	1.0E0
_		REGION:VL9 epitope	RT	3		4.9E-2	
		REGION: Necessary for RNA-binding	RT	3		4.9E-2	
	UP_SEQ_FEATURE	LIPID:(Microbial infection) N6-stearoyl lysine	RT	3		4.9E-2	
	UP_SEQ_FEATURE	REGION:Interaction with NR1D1	RT			4.9E-2	
_	UP_SEQ_FEATURE	TRANSMEM:Helical; Name=II	RT			4.9E-2	
	_	TRANSMEM:Helical; Name=I	RT			4.9E-2	
	-	ZN_FING:C2HC RNF-type	RT	3		4.9E-2	
	_	REGION: Necessary for transcriptional repression	RT	3		4.9E-2	
_	_	DOMAIN: RNA-binding S4	RT	3		4.9E-2	
	UF_SEV_FEATURE	DOMAIN:MHC class II beta chain N-terminal	RT	5	U.Z	5.0E-2	I.UEU

Sublis	t Category	Term	RT Genes	Count	%	P-Value	Benjamini
	UP_SEQ_FEATURE	REPEAT:Spectrin 6	RT	5	0.2	5.0E-2	1.0E0
	UP_SEQ_FEATURE	REPEAT:Spectrin 5	RT	5	0.2	5.0E-2	1.0E0
	UP_SEQ_FEATURE	REPEAT:4	RT	27	1.3	5.1E-2	1.0E0
	UP_SEQ_FEATURE	REPEAT: 2	RT	34	1.7	5.1E-2	1.0E0
	UP_SEQ_FEATURE	ACT_SITE:Glycyl thioester intermediate	RT	13	0.6	5.2E-2	1.0E0
	UP_SEQ_FEATURE	DOMAIN:MHC class I-like antigen recognition-like	RT	6	0.3	5.6E-2	1.0E0
	UP_SEQ_FEATURE	DOMAIN:Arf-GAP	RT	7	0.3	5.6E-2	1.0E0
	UP_SEQ_FEATURE	DOMAIN:USP	RT	13	0.6	5.7E-2	1.0E0
	UP_SEQ_FEATURE	MOTIF:Bipartite nuclear localization signal	RT	10	0.5	6.1E-2	1.0E0
	UP_SEQ_FEATURE	DOMAIN: Cyclin-like	RT	7	0.3	6.5E-2	1.0E0
	UP_SEQ_FEATURE	DOMAIN: Cation-transporting P-type ATPase C-terminal	RT	4	0.2	6.5E-2	1.0E0
	UP_SEQ_FEATURE	DOMAIN:Tudor	RT	6	0.3	6.6E-2	1.0E0
	UP_SEQ_FEATURE	SITE:Important for catalytic activity	RT	8	0.4	7.0E-2	1.0E0
	UP_SEQ_FEATURE	REPEAT:7	RT	20	1.0	7.1E-2	1.0E0
	UP_SEQ_FEATURE	REPEAT: TPR 3	RT	21	1.0	7.2E-2	1.0E0
	UP_SEQ_FEATURE	DOMAIN: PARP catalytic	RT	5	0.2	7.5E-2	1.0E0
	UP_SEQ_FEATURE	REPEAT: 2-3	RT	5	0.2	7.5E-2	1.0E0
	UP_SEQ_FEATURE	DOMAIN: PPIase cyclophilin-type	RT	6	0.3	7.7E-2	1.0E0
	UP_SEQ_FEATURE	MOTIF:Box 1 motif	RT	6	0.3	7.7E-2	1.0E0
	UP_SEQ_FEATURE	REGION:Calcineurin-binding	<u>RT</u>	3	0.1	7.7E-2	1.0E0
	UP_SEQ_FEATURE	DOMAIN:SKICH	RT	3	0.1	7.7E-2	1.0E0
	UP_SEQ_FEATURE	DOMAIN: Phosphoribosyltransferase	RT	3	0.1	7.7E-2	1.0E0
	UP_SEQ_FEATURE	REPEAT: HAT 8	RT	3	0.1	7.7E-2	1.0E0
	UP_SEQ_FEATURE	DOMAIN:Longin	RT	3	0.1	7.7E-2	1.0E0
	UP_SEQ_FEATURE	REGION:PABPC1-interacting motif-2 (PAM2)	RT	3	0.1	7.7E-2	1.0E0
	UP_SEQ_FEATURE	MUTAGEN:K->R: Loss of sumoylation.	RT	3	0.1	7.7E-2	1.0E0
	UP_SEQ_FEATURE	MUTAGEN:K->R: Complete loss of in vitro methylation by METTL21A.	RT	3	0.1	7.7E-2	1.0E0
	UP_SEQ_FEATURE	ZN_FING:AN1-type	RT	3	0.1	7.7E-2	1.0E0
	UP_SEQ_FEATURE	ZN_FING:RING-type; atypical	RT	8	0.4	7.8E-2	1.0E0
	UP_SEQ_FEATURE	DNA_BIND:A.T hook 1	RT	4	0.2	8.3E-2	1.0E0
	UP_SEQ_FEATURE	DNA_BIND:A.T hook 2	RT	4	0.2	8.3E-2	1.0E0
	UP_SEQ_FEATURE	ZN_FING:PHD-type 3	RT	4		8.3E-2	
	UP_SEQ_FEATURE	DOMAIN:ITAM	RT	4		8.3E-2	
	UP_SEQ_FEATURE		RT	4	0.2	8.3E-2	
		REGION: Catalytic	RT	6	0.3	8.8E-2	
	UP_SEQ_FEATURE		RT	5		9.0E-2	
	UP_SEQ_FEATURE	ACT_SITE:Proton donor	RT	31	1.5	9.7E-2	1.0E0

280 gene(s) from your list are not in the output.

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