

DAVID Bioinformatics Resources 6.7

National Institute of Allergy and Infectious Diseases (NIAID), NIH

Help and Manual

*** Announcing the new DAVID Web Service which allows access to DAVID from various programming languages. More info... ***

Functional Annotation Clustering

Current Gene List: List_1

Current Background: Homo sapiens

1960 DAVID IDs

Classification Stringency High **Options**

)7 CI	luster(s)					L Dow	nload Fil
	Annotation Cluster 1	Enrichment Score: 19.33	G		Count	P_Value	Benjami
	SP_PIR_KEYWORDS	tyrosine-protein kinase	<u>RT</u>		56	5.0E-26	2.9E-24
	INTERPRO	Tyrosine protein kinase, active site	<u>RT</u>		50	1.5E-21	3.9E-18
	INTERPRO	Tyrosine protein kinase	<u>RT</u>		53	2.1E-19	2.7E-16
	SMART	<u>TyrKc</u>	<u>RT</u>		53	4.2E-17	1.6E-14
	GOTERM_MF_FAT	protein tyrosine kinase activity	<u>RT</u>	=	65	3.3E-16	5.4E-13
	Annotation Cluster 2	Enrichment Score: 19.15	G		Count	P_Value	Benjan
	GOTERM_BP_FAT	hemopoietic or lymphoid organ development	RT		94	1.2E-20	3.2E-18
	GOTERM_BP_FAT	<u>hemopoiesis</u>	<u>RT</u>		88	2.3E-20	5.7E-18
	GOTERM_BP_FAT	immune system development	<u>RT</u>		94	1.2E-18	1.7E-16
	Annotation Cluster 3	Enrichment Score: 18.97	G		Count	P_Value	Benjan
	GOTERM_BP_FAT	regulation of phosphorus metabolic process	RT		140	7.0E-20	1.4E-17
	GOTERM_BP_FAT	regulation of phosphate metabolic process	<u>RT</u>		140	7.0E-20	1.4E-17
	GOTERM_BP_FAT	regulation of phosphorylation	RT		135	2.4E-19	3.9E-17
	Annotation Cluster 4	Enrichment Score: 18.33	G		Count	P_Value	Benjan
	GOTERM_BP_FAT	regulation of cell death	<u>RT</u>		200	4.1E-19	6.1E-17
	GOTERM_BP_FAT	regulation of apoptosis	<u>RT</u>		198	4.2E-19	6.1E-17
	GOTERM_BP_FAT	regulation of programmed cell death	RT		199	5.9E-19	8.4E-17
	Annotation Cluster 5	Enrichment Score: 17.23	G		Count	P_Value	Benjar
	GOTERM_BP_FAT	protein amino acid phosphorylation	<u>RT</u>		173	4.0E-19	6.2E-17
	GOTERM_BP_FAT	phosphorus metabolic process	<u>RT</u>		226	1.8E-18	2.3E-16
	GOTERM_BP_FAT	phosphate metabolic process	RT		226	1.8E-18	2.3E-16
	GOTERM_BP_FAT	<u>phosphorylation</u>	<u>RT</u>		188	1.0E-15	8.7E-14
	Annotation Cluster 6	Enrichment Score: 16.92	G		Count	P_Value	Benjar
	GOTERM_BP_FAT	chemical homeostasis	<u>RT</u>		149	1.7E-21	6.1E-19
	GOTERM_BP_FAT	ion homeostasis	RT		121	3.5E-18	4.2E-16
	GOTERM_BP_FAT	cellular ion homeostasis	<u>RT</u>	_	111	7.4E-17	1.1E-14
	GOTERM_BP_FAT						
		cellular chemical homeostasis	<u>RT</u>		112	9.1E-17	1.1E-14
	GOTERM_BP_FAT	cellular homeostasis	<u>RT</u>	=	125	6.0E-15	/ 7E-13
	Annotation Cluster 7	Enrichment Score: 16.15	<u>KI</u> G	_	<u></u>		
	UP_SEQ_FEATURE	binding site:ATP	RT	_	132	6.7E-22	
	UP_SEQ_FEATURE	domain:Protein kinase	RT	=	112	5.0E-18	
	INTERPRO	Protein kinase, ATP binding site		_	114	3.4E-16	
	INTERPRO		<u>RT</u>	=			
	GOTERM_MF_FAT	Protein kinase, core	<u>RT</u>	_	116	1.7E-15	
		protein kinase activity	<u>RT</u>	-	145	9.1E-13	
	Annotation Cluster 8 GOTERM_BP_FAT	Enrichment Score: 14.61	G	_	•		
		metal ion homeostasis	<u>RT</u>	=	76	1.6E-17	
	GOTERM_BP_FAT GOTERM_BP_FAT	cellular metal ion homeostasis	<u>RT</u>	-	72	3.2E-16	3.2E-14

0	GOTERM_BP_FAT		_	_		4.05.45	0.05.44
	GOTERM BP FAT	cellular calcium ion homeostasis	<u>RT</u>	_	68	1.0E-15	
		di-, tri-valent inorganic cation homeostasis	<u>RT</u>	_	80	2.3E-15	
	GOTERM_BP_FAT	cation homeostasis	<u>RT</u>	=	89	7.5E-15	
	GOTERM_BP_FAT	cellular di-, tri-valent inorganic cation homeostasis	<u>RT</u>	_	74	1.3E-13	8.4E-12
	GOTERM_BP_FAT	cellular cation homeostasis	<u>RT</u>	<u> </u>	79	3.0E-13	
	Annotation Cluster 9 GOTERM_BP_FAT	Enrichment Score: 14.36	G	_	Count		Benjamini
	GOTERM_BP_FAT	<u>cell migration</u>	<u>RT</u>	_	89	7.0E-16	
		<u>cell motility</u>	<u>RT</u>	_	93	1.1E-14	
	GOTERM_BP_FAT	localization of cell	<u>RT</u>		93	1.1E-14	
	Annotation Cluster 10 GOTERM_BP_FAT	Enrichment Score: 13.84	G		Count		Benjamini
	GOTERM_BP_FAT	cAMP-mediated signaling	RT	-	45	4.6E-15	
	GOTERM_BP_FAT	cyclic-nucleotide-mediated signaling G-protein signaling, coupled to cyclic nucleotide	<u>RT</u>	-	54	5.9E-15	
	GOTERW_DF_FAT	second messenger	<u>RT</u>	-	49	3.9E-14	2.6E-12
	GOTERM_BP_FAT	G-protein signaling, coupled to cAMP nucleotide second messenger	<u>RT</u>	•	41	4.2E-14	2.8E-12
	Annotation Cluster 11	Enrichment Score: 13.82	G		Count	P_Value	Benjamini
	GOTERM_BP_FAT	positive regulation of biosynthetic process	<u>RT</u>		180	8.3E-20	1.7E-17
	GOTERM_BP_FAT	positive regulation of cellular biosynthetic process	<u>RT</u>	=	177	2.3E-19	3.7E-17
	GOTERM_BP_FAT	positive regulation of macromolecule biosynthetic process	<u>RT</u>		164	2.2E-16	2.2E-14
	GOTERM_BP_FAT	positive regulation of nitrogen compound metabolic process	<u>RT</u>	=	161	5.1E-16	5.1E-14
	GOTERM_BP_FAT	positive regulation of nucleobase, nucleoside, nucleotide and nucleic acid metabolic process	<u>RT</u>	_	151	8.6E-14	5.6E-12
	GOTERM_BP_FAT	positive regulation of transcription from RNA	RT		102	4.7E-13	2.6F-11
	GOTERM_BP_FAT	polymerase II promoter positive regulation of gene expression	RT	=	141	5.0E-13	
	GOTERM_BP_FAT	positive regulation of transcription		=	133	2.2E-11	
	GOTERM_BP_FAT		<u>RT</u>	=			
	GOTERM_BP_FAT	positive regulation of RNA metabolic process positive regulation of transcription, DNA-	<u>RT</u>	_	118	2.4E-11	
	GOTERW_DF_FAT	dependent	<u>RT</u>	_	117	3.0E-11	1.1E-9
	Annotation Cluster 12 GOTERM BP FAT	Enrichment Score: 13.11	G	_	Count		Benjamini
		regulation of kinase activity	<u>RT</u>	_	102	3.4E-14	
	GOTERM_BP_FAT	regulation of transferase activity	<u>RT</u>	=	104	8.6E-14	
	GOTERM_BP_FAT	regulation of protein kinase activity	<u>RT</u>		98	1.7E-13	
	Annotation Cluster 13 GOTERM_BP_FAT	Enrichment Score: 12.71	G		Count		Benjamini
	GOTERM_BP_FAT	regulation of locomotion	<u>RT</u>	_	70	1.2E-15	
	GOTERM_BP_FAT	regulation of cell migration	<u>RT</u>	_	59	2.1E-12	
	Annotation Cluster 14	regulation of cell motion Enrichment Score: 12.27	<u>RT</u>		64 Count	3.0E-12	1.4E-10 Benjamini
	GOTERM_BP_FAT	positive regulation of protein kinase activity	G RT	=	73	1.5E-13	1
	GOTERM_BP_FAT	positive regulation of kinase activity	RT		74	3.5E-13	
	GOTERM_BP_FAT	positive regulation of transferase activity	RT	=	74	2.9E-12	
	Annotation Cluster 15	Enrichment Score: 12.16	G		Count		Benjamini
	GOTERM_BP_FAT	negative regulation of apoptosis	RT	= -	99	3.5E-13	
	GOTERM_BP_FAT	negative regulation of programmed cell death	RT	=	99	9.0E-13	
	GOTERM_BP_FAT	negative regulation of cell death	RT	=	99	1.1E-12	
J	Annotation Cluster 16	Enrichment Score: 11.92	G		Count		Benjamini
	GOTERM_BP_FAT	positive regulation of locomotion	<u>RT</u>	_	45	1.9E-14	1.4E-12
	GOTERM_BP_FAT	positive regulation of cell migration	<u>RT</u>	•	39	7.7E-12	3.3E-10
	GOTERM_BP_FAT	positive regulation of cell motion	<u>RT</u>		41	1.2E-11	5.0E-10
	Annotation Cluster 17	Enrichment Score: 11.61	G	er e	Count	P_Value	Benjamini
	GOTERM_BP_FAT	regulation of cyclase activity	<u>RT</u>	=	43	7.9E-13	4.3E-11
	GOTERM_BP_FAT	regulation of adenylate cyclase activity	<u>RT</u>	Ē	42	1.1E-12	5.9E-11
	GOTERM_BP_FAT	regulation of lyase activity	<u>RT</u>	•	43	1.8E-12	8.8E-11
	GOTERM_BP_FAT	regulation of cAMP biosynthetic process	<u>RT</u>	i	43	1.8E-12	8.8E-11
	GOTERM_BP_FAT	regulation of cyclic nucleotide biosynthetic process	<u>RT</u>		45	2.6E-12	1.2E-10

	GOTERM_BP_FAT	regulation of nucleotide biosynthetic process	RT		45	2.6E-12	1.2E-10
	GOTERM_BP_FAT	regulation of cAMP metabolic process	<u>RT</u>		43	3.9E-12	1.7E-10
	GOTERM_BP_FAT	regulation of nucleotide metabolic process	RT		46	5.3E-12	2.3E-10
	GOTERM_BP_FAT	regulation of cyclic nucleotide metabolic process	RT		45	7.8E-12	3.3E-10
	Annotation Cluster 18	Enrichment Score: 11.02	G		Count	P_Value	Benjamini
	GOTERM_BP_FAT	vasculature development	<u>RT</u>	=	77	1.3E-12	6.9E-11
	GOTERM_BP_FAT	blood vessel development	<u>RT</u>	=	75	3.0E-12	1.4E-10
	GOTERM_BP_FAT	blood vessel morphogenesis	<u>RT</u>	=	64	2.1E-10	7.1E-9
	Annotation Cluster 19	Enrichment Score: 10.99	G		Count	P_Value	Benjamini
	GOTERM_BP_FAT	positive regulation of phosphate metabolic process	<u>RT</u>	•	44	2.4E-13	1.4E-11
	GOTERM_BP_FAT	positive regulation of phosphorus metabolic process	<u>RT</u>	•	44	2.4E-13	1.4E-11
	GOTERM_BP_FAT	positive regulation of phosphorylation	<u>RT</u>		43	3.4E-13	2.0E-11
	GOTERM_BP_FAT	positive regulation of protein amino acid phosphorylation	<u>RT</u>		40	1.5E-12	7.7E-11
	GOTERM_BP_FAT	positive regulation of protein modification process	<u>RT</u>		49	4.0E-6	6.8E-5
	Annotation Cluster 20	Enrichment Score: 10.8	G				Benjamini
	GOTERM_BP_FAT	positive regulation of adenylate cyclase activity	<u>RT</u>		30	6.5E-12	2.8E-10
	GOTERM_BP_FAT	positive regulation of cyclase activity	<u>RT</u>	•	30	1.1E-11	4.7E-10
	GOTERM_BP_FAT	activation of adenylate cyclase activity	<u>RT</u>		29	2.6E-11	9.7E-10
	GOTERM_BP_FAT	positive regulation of lyase activity	<u>RT</u>		30	3.4E-11	1.3E-9
	Annotation Cluster 21	Enrichment Score: 10.68	G	in the second se	Count	P_Value	Benjamini
	GOTERM_BP_FAT	positive regulation of cell death	<u>RT</u>		110	1.7E-11	6.8E-10
	GOTERM_BP_FAT	positive regulation of apoptosis	<u>RT</u>	=	109	1.8E-11	7.2E-10
	GOTERM_BP_FAT	positive regulation of programmed cell death	<u>RT</u>	=	109	2.9E-11	1.1E-9
	Annotation Cluster 22	Enrichment Score: 10.07	G		Count	P_Value	Benjamini
	GOTERM_BP_FAT	regulation of cell activation	<u>RT</u>	=	59	1.1E-11	4.5E-10
	GOTERM_BP_FAT	regulation of leukocyte activation	<u>RT</u>	=	56	3.8E-11	1.4E-9
	GOTERM_BP_FAT	regulation of lymphocyte activation	<u>RT</u>	-	49	1.5E-9	4.6E-8
_	Annotation Cluster 23	Enrichment Score: 9.85	G	_			Benjamini
	GOTERM_BP_FAT	regulation of body fluid levels	<u>RT</u>	-	51	1.8E-11	
0	GOTERM_BP_FAT	blood coagulation	<u>RT</u>	•	40	2.3E-10	
	GOTERM_BP_FAT	coagulation	<u>RT</u>	•	40	2.3E-10	
	GOTERM_BP_FAT	hemostasis	RT	·	41	4.2E-10	
	Annotation Cluster 24 GOTERM_BP_FAT	Enrichment Score: 9.66 positive regulation of leukocyte activation	G <u>RT</u>		42	5.2E-11	Benjamini
	GOTERM BP FAT	positive regulation of cell activation		-	43	6.9E-11	
	GOTERM BP FAT	positive regulation of lymphocyte activation	RT DT		43 37		
	Annotation Cluster 25	Enrichment Score: 9.43	RT G	• •		2.9E-9 P Value	8.3E-8 Benjamini
	GOTERM_CC_FAT	vesicle	RT	_	143	1.1E-10	
	GOTERM_CC_FAT	membrane-bounded vesicle	RT	=	126		4.0E-9
	GOTERM_CC_FAT	cytoplasmic membrane-bounded vesicle	RT	_	120	1.1E-9	2.7E-8
	GOTERM_CC_FAT	cytoplasmic vesicle	RT	_	135	1.2E-9	2.7E-8
	Annotation Cluster 26	Enrichment Score: 8.79	G				Benjamini
	GOTERM_BP_FAT	regulation of neurological system process	<u>RT</u>	-	52	1.5E-10	5.2E-9
	GOTERM_BP_FAT	regulation of transmission of nerve impulse	<u>RT</u>	■	48	3.7E-9	1.1E-7
	GOTERM_BP_FAT	regulation of synaptic transmission	<u>RT</u>	=	45	7.7E-9	2.1E-7
	Annotation Cluster 27	Enrichment Score: 8.25	G		Count	P_Value	Benjamini
	GOTERM_CC_FAT	vesicle lumen	<u>RT</u>	i	24	8.2E-10	2.1E-8
	GOTERM_CC_FAT	cytoplasmic membrane-bounded vesicle lumen	<u>RT</u>	i	23	1.9E-9	4.3E-8
	GOTERM_CC_FAT	platelet alpha granule lumen	<u>RT</u>	i	20	1.2E-7	2.0E-6
	Annotation Cluster 28	Enrichment Score: 8.16	G	_			Benjamini
	GOTERM_CC_FAT	sarcomere	<u>RT</u>		37	8.8E-10	
	GOTERM_CC_FAT	myofibril	<u>RT</u>		39	3.1E-9	6.6E-8
	GOTERM_CC_FAT	contractile fiber part	<u>RT</u>		38	1.9E-8	3.9E-7

1		GOTERM_CC_FAT	contractile fiber	RT	•		39	4.4E-8	8.1E-7
		Annotation Cluster 29	Enrichment Score: 7.81	G	_	1			Benjamini
1		GOTERM_BP_FAT	positive regulation of behavior	RT		•	20	5.4E-9	1.5E-7
		GOTERM_BP_FAT	positive regulation of chemotaxis	RT	_		18	1.3E-8	3.5E-7
	_	GOTERM_BP_FAT	regulation of behavior	RT			23	1.6E-8	4.1E-7
		GOTERM_BP_FAT	regulation of chemotaxis	RT			18		1.2E-6
(Annotation Charter 20			_	•			
,		Annotation Cluster 30 GOTERM_MF_FAT	Enrichment Score: 7.11	G DT	=	l		P_Value 5.5E-9	Benjamini
		GOTERM MF FAT	heparin binding polysaccharide binding	RT DT	-		38		9.9E-7
		GOTERM_MF_FAT	•	RT DT	•		46		1.6E-5
		GOTERM_MF_FAT	pattern binding	RT DT	=		46		1.6E-5
l		Annotation Cluster 31	glycosaminoglycan binding Enrichment Score: 6.89	RT G	-	1	43		1.8E-5 Benjamini
1		GOTERM_BP_FAT	positive regulation of leukocyte proliferation	RT		•	25	5.0E-8	1.2E-6
		GOTERM_BP_FAT	positive regulation of mononuclear cell proliferation		1		25		1.2E-6
		GOTERM_BP_FAT	regulation of leukocyte proliferation	RT	1		31	1.6E-7	3.6E-6
	_	GOTERM_BP_FAT	regulation of mononuclear cell proliferation	RT	1		31	1.6E-7	3.6E-6
		GOTERM_BP_FAT	positive regulation of lymphocyte proliferation	RT	-		24	1.6E-7	3.7E-6
	_	GOTERM_BP_FAT	regulation of lymphocyte proliferation	RT	=		30		9.1E-6
		Annotation Cluster 32	Enrichment Score: 6.77	<u>KI</u> G	-	1			9.1E-6 Benjamini
1		GOTERM_BP_FAT	positive regulation of adenylate cyclase activity by	RT	=	•	20	1.7E-7	3.8E-6
		GOTERM_BP_FAT	G-protein signaling pathway activation of adenylate cyclase activity by G-protein		-				
(signaling pathway	<u>RT</u>	•		20	1.7E-7	3.8E-6
(GOTERM_BP_FAT	regulation of adenylate cyclase activity involved in G-protein signaling	<u>RT</u>	•		20	1.7E-7	3.8E-6
		Annotation Cluster 33	Enrichment Score: 6.76	G			Count	P_Value	Benjamini
(GOTERM_BP_FAT	regulation of phospholipase activity	<u>RT</u>	•		29	3.6E-8	9.0E-7
(GOTERM_BP_FAT	positive regulation of phospholipase activity	<u>RT</u>	=		28	7.5E-8	1.8E-6
(GOTERM_BP_FAT	activation of phospholipase C activity	<u>RT</u>	•		27	7.7E-8	1.8E-6
(GOTERM_BP_FAT	positive regulation of phospholipase C activity	<u>RT</u>	•		27	7.7E-8	1.8E-6
(GOTERM_BP_FAT	regulation of lipase activity	<u>RT</u>	•		32	1.1E-7	2.4E-6
(GOTERM_BP_FAT	positive regulation of lipase activity	<u>RT</u>	•		28	5.5E-7	1.1E-5
(GOTERM_BP_FAT	activation of phospholipase C activity by G-protein coupled receptor protein signaling pathway coupled to IP3 second messenger	<u>RT</u>	i		21	5.0E-6	8.3E-5
		Annotation Cluster 34	Enrichment Score: 6.75	G			Count	P_Value	Benjamini
(UP_SEQ_FEATURE	region of interest:Alpha-2	<u>RT</u>			13	6.8E-8	2.4E-5
(UP_SEQ_FEATURE	region of interest:Alpha-1	<u>RT</u>	i		13	6.8E-8	2.4E-5
(UP_SEQ_FEATURE	region of interest:Connecting peptide	<u>RT</u>	•		17	3.1E-7	1.0E-4
(UP_SEQ_FEATURE	domain:Ig-like C1-type	<u>RT</u>	i		17	7.1E-7	2.0E-4
		Annotation Cluster 35	Enrichment Score: 6.55	G	_				Benjamini
(_	SP_PIR_KEYWORDS	mitogen	<u>RT</u>	•		19	8.6E-9	1.2E-7
(GOTERM_BP_FAT	regulation of cell division	<u>RT</u>	•		21	7.5E-7	1.5E-5
(GOTERM_BP_FAT	positive regulation of cell division	<u>RT</u>	•	_	18	3.4E-6	5.9E-5
		Annotation Cluster 36	Enrichment Score: 6.52	G	_				Benjamini
		KEGG_PATHWAY	Type I diabetes mellitus	<u>RT</u>			26	2.3E-8	4.8E-7
	_	KEGG_PATHWAY	Allograft rejection	<u>RT</u>			23		1.6E-6
(KEGG_PATHWAY	Graft-versus-host disease	<u>RT</u>	•	•	21		1.6E-4
,		Annotation Cluster 37 GOTERM_BP_FAT	Enrichment Score: 6.49	G DT	=	l	Count 35	P_Value 1.7E-7	Benjamini 3.8E-6
		GOTERM_BP_FAT	respiratory tube development	RT DT	•				
			lung development	<u>RT</u>	-		34		5.5E-6
(GOTERM_BP_FAT	respiratory system development	RT		•	35		1.5E-5
		Annotation Cluster 38	Enrichment Score: 6.46	G	_				Benjamini
		UP_SEQ_FEATURE	repeat:II	<u>RT</u>			14		1.1E-4
		UP_SEQ_FEATURE	repeat:III	<u>RT</u>			14		1.1E-4
(UP_SEQ_FEATURE	repeat:I	<u>RT</u>			14	3.4E-7	1.1E-4
		HD SEC EEATHDE	. 10.7	-	-		•	0 4E Z	4.5.4