Msiq-DB URL:

http://www.gsea-msigdb.org/gsea/msigdb/search.jsp

Gene set URL:

https://www.gsea-msigdb.org/gsea/msigdb/cards/KRAS.LUNG.BREAST_UP.V1_DN

Size of gene set: 141

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DTNB

ACKR3 DTX2 ADAMTS20 EPB41L4A ADD2 EPHX2 ADGRE1 ERAP2 AKAP6 FGFR3 AKR1B10 FLT1 ALDH5A1 FMO6P ALOX12B FRAS1 AMBN GABRA4 ANKRD1 GADD45G **APOB GAMT** ART1 **GDNF** ATP6V1B1 GLS2 BDKRB1 **GLYAT** C5AR2 H3C1 CACNA1I HCN2 **CALCB** HHLA1 CALML3 HRK CALML5 HTR1B CCDC121 HTR1E CD248 IFI44L **CD36** IFNA16 CD6 IGF2-AS CDH₁₂ IGFBP2 CDH₁₆ IL5RA INPP5D CLCA2 CLDN8 IVL COBL KCNMB1 COL2A1 KIF25 COL5A2 KRT13 CRABP2 KRT16 CXCL14 KRT38 CYP21A2 KRT4 DEFB1 LGALS7 DPT LGALS9

LY6D

RYR1 MAP2K6 S100A7 MAST3 MEGF8 SCARF1 METTL7A SCN7A MMP28 SERPINA10 SERPINB13 **MTHFR** MXD3 SIDT1 MXRA8 SLC12A3 MYL9 SLC3A1 NCR3 SLC6A9 NOS1 **SOBP** NOX5 SOX11 NSUN6 SPAG11A NTF3 SPTBN2 NYNRIN SYNDIG1 OLFML2A TAS2R4 P2RX1 TBR1 PAQR6 TGM1 PARP3 THNSL2 PBX1 TM4SF4 PCDHB1 TNFSF10 TNNI3 PDE3A PDE6B TRIM48 PGGHG TRIM9 PIK3C2B TRPM2 PLBD1 TSBP1 **PROC TSHB PTPRU** TTLL1 **PVALB** UPK3B RAG1 VAV3 RAMP3 VAX2 RARRES2 VPS50 YPEL1 RBM17 RPL13P5

RTP4

RUNDC3B

<u>DAVID URL:</u> https://david.ncifcrf.gov/

Functional annotation Chart:



	UP_SEQ_FEATURE	REGION:Coil 2	RT =	4	2,8	8,8E-3	8,6E-1
	UP_SEQ_FEATURE	REGION:Linker 12	RT =	4	2,8	8,8E-3	8,6E-1
	UP_SEQ_FEATURE	DOMAIN:EF-hand 2	RT =	6	4,3	9,1E-3	8,6E-1
	INTERPRO	EF-Hand 1, calcium-binding site	RT =	6	4,3	9,8E-3	1,0E0
	INTERPRO	Intermediate filament protein, conserved site	RT =	4	2,8	1,0E-2	1,0E0
	GOTERM_BP_DIRECT	intermediate filament organization	RT =	4	2,8	1,0E-2	1,0E0
	KEGG_PATHWAY	<u>Circadian entrainment</u>	RT =	5	3,5	1,0E-2	3,9E-1
	UP_SEQ_FEATURE	REGION:Coil 1B	RT =	4	2,8	1,1E-2	8,6E-1
	GOTERM_MF_DIRECT	voltage-gated sodium channel activity	RT =	3	2,1	1,1E-2	8,0E-1
	UP_SEQ_FEATURE	REGION:Coil 1A	RT =	4	2,8	1,1E-2	8,6E-1
	UP_SEQ_FEATURE	REGION:Linker 1	RT =	4	2,8	1,1E-2	8,6E-1
	GOTERM_MF_DIRECT	flavin adenine dinucleotide binding	RT =	4	2,8	1,2E-2	8,0E-1
	UP_SEQ_FEATURE	REGION:Head	RT =	4	2,8	1,3E-2	8,6E-1
	UP_SEQ_FEATURE	REGION:Tail	RT =	4	2,8	1,4E-2	8,6E-1
	UP SEQ FEATURE	DOMAIN: IF rod	RT 🖥	4	2,8	1,5E-2	8,6E-1
	GOTERM_BP_DIRECT	keratinization	RT =	4	2,8	1,5E-2	1,0E0
	UP KW DISEASE	Disease variant	RT	35	24,8	1,5E-2	4,1E-1
$\overline{\Box}$	INTERPRO	Insulin-like growth factor binding protein, N-terminal	RT =	5		1,6E-2	
	SMART	EGF	RT =	6		1,7E-2	
	UP SEQ FEATURE	METAL: Calcium	RT =	6	4,3		9,2E-1
	GOTERM_CC_DIRECT	extracellular exosome	RT	24		1,7E-2	
	UP_KW_CELLULAR_COMPONENT		RT =	4		1,8E-2	
	GOTERM_BP_DIRECT	positive regulation of phosphatidylinositol 3-kinase activity	RT	3		2,0E-2	
	GOTERM_BP_DIRECT	cell-cell signaling	RT =	6	4,3		
	GOTERM BP DIRECT	neuronal action potential	RT	3	2,1		
	SMART	SM01391	RT =	4	2,8		8,4E-1
	UP_KW_MOLECULAR_FUNCTION	Sodium channel	RT	3	2,1	2,1E-2	4,6E-1
	KEGG PATHWAY	Renin secretion	RT =	4	2,8		6,9E-1
	UP_SEQ_FEATURE	DOMAIN:VWFC	RT =	3	2,1		
	INTERPRO	Keratin, type I	RT =	3	2,1		
$\overline{\Box}$	UP_KW_CELLULAR_COMPONENT		RT	38		2,3E-2	
	UP_KW_MOLECULAR_FUNCTION		RT =	4	2,8		4,6E-1
	GOTERM BP DIRECT	cAMP-mediated signaling	RT	3	2,1	2,5E-2	
	INTERPRO	EF-hand domain	RT =	6	4,3		
	GOTERM_BP_DIRECT	extracellular matrix organization	RT =	5	3,5	2,6E-2	
	GOTERM_BP_DIRECT	epithelial cell differentiation	RT =	4		2,6E-2	
	UP_KW_BIOLOGICAL_PROCESS		RT	4	2,8		4,3E-1
	GOTERM_CC_DIRECT	cytoskeleton	RT =	9	6,4		6,1E-1
	UP KW PTM	Cleavage on pair of basic residues	RT =	7	5,0		1,9E-1
	UP_KW_LIGAND	NADP	RT =	6	4,3		3,6E-1
	KEGG_PATHWAY	Phototransduction	RT	3	2,1		6,9E-1
	GOTERM_BP_DIRECT	skin development	RT =	3	2,1		
ō	INTERPRO	Epidermal growth factor-like domain	RT =	6	4,3	2,8E-2	
П	GOTERM_BP_DIRECT	angiogenesis	RT =	6	4,3		
ŏ	GOTERM_BP_DIRECT	embryonic limb morphogenesis	RT	3	2,1	2,8E-2	
ŏ	UP_KW_BIOLOGICAL_PROCESS		RT	2	1,4		4,3E-1
ŏ	SMART	EFh .	RT =	5	3,5		8,4E-1
Ĭ.	GOTERM_CC_DIRECT	collagen type XI trimer	RT =	2		3,2E-2	
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