

Table S5 GO analysis of up-regulated mRNAs in GAS of *db/db* vs. *db/m* mice. Top 10 significantly changed terms are shown.

GO C Term ID	GO C Term Desc	GO C Term Level1	GO C Term Level2	Term Candidate Gene Num	Total Candidate Gene Num	Term Gene Num	Total Gene Num	Rich Ratio	p-value	q-value
GO:0005576	extracellular region	cellular_component	extracellular region	122	598	1885	22482	0.06472149	1.19E-20	4.98E-18
GO:0062023	collagen-containing extracellular matrix	cellular_component	extracellular region part	36	598	304	22482	0.11842105	6.87E-14	1.44E-11
GO:0005615	extracellular space	cellular_component	extracellular region part	99	598	1724	22482	0.05742459	2.07E-13	2.89E-11
GO:0031012	extracellular matrix	cellular_component	extracellular region part	30	598	280	22482	0.10714286	1.07E-10	1.12E-08
GO:0016021	integral component of membrane	cellular_component	membrane	255	598	7116	22482	0.03583474	6.88E-09	5.75E-07
GO:0016020	membrane	cellular_component	membrane	296	598	8846	22482	0.03346145	2.15E-07	1.50E-05
GO:0005581	collagen trimer	cellular_component	protein-containing complex	12	598	92	22482	0.13043478	5.87E-06	3.50E-04
GO:0099055	integral component of postsynaptic membrane	cellular_component	membrane	11	598	84	22482	0.13095238	1.38E-05	7.20E-04
GO:0043025	neuronal cell body	cellular_component	cell part	35	598	655	22482	0.05343511	8.18E-05	0.0038014
GO:0005887	integral component of plasma membrane	cellular_component	membrane	56	598	1269	22482	0.04412924	1.46E-04	0.0060839
GO:0005201	extracellular matrix structural constituent	molecular_function	structural molecule activity	19	573	123	21691	0.15447154	5.83E-10	4.38E-07
GO:0005520	insulin-like growth factor binding	molecular_function	binding	7	573	24	21691	0.29166667	2.03E-06	7.61E-04
GO:0030020	extracellular matrix structural constituent conferring tensile strength	molecular_function	structural molecule activity	8	573	39	21691	0.20512821	6.75E-06	0.00168882
GO:0005216	ion channel activity	molecular_function	transporter activity	17	573	194	21691	0.08762887	1.66E-05	0.00312373
GO:0005509	calcium ion binding	molecular_function	binding	41	573	790	21691	0.05189873	3.33E-05	0.00500473
GO:0001968	fibronectin binding	molecular_function	binding	6	573	32	21691	0.1875	1.67E-04	0.02091126
GO:0005104	fibroblast growth factor receptor binding	molecular_function	binding	5	573	28	21691	0.17857143	7.51E-04	0.08054993
GO:0008201	heparin binding	molecular_function	binding	13	573	179	21691	0.0726257	9.79E-04	0.08168177
GO:0008237	metallopeptidase activity	molecular_function	catalytic activity	13	573	178	21691	0.07303371	9.30E-04	0.08168177
GO:0005244	voltage-gated ion channel activity	molecular_function	transporter activity	11	573	142	21691	0.07746479	0.00140313	0.1000006
GO:0007155	cell adhesion	biological_process	biological adhesion	38	582	587	22257	0.06473595	3.20E-07	8.13E-04
GO:0006811	ion transport	biological_process	localization	37	582	611	22257	0.06055646	2.24E-06	0.00272002
GO:0030198	extracellular matrix organization	biological_process	cellular process	15	582	143	22257	0.1048951	5.36E-06	0.00272002
GO:0034097	response to cytokine	biological_process	response to stimulus	12	582	89	22257	0.13483146	3.46E-06	0.00272002
GO:0034220	ion transmembrane transport	biological_process	localization	18	582	196	22257	0.09183673	4.29E-06	0.00272002
GO:0042904	9-cis-retinoic acid biosynthetic process	biological_process	metabolic process	4	582	6	22257	0.66666667	6.66E-06	0.00281505
GO:0001503	ossification	biological_process	multicellular organismal process	12	582	103	22257	0.11650485	1.60E-05	0.0058064
GO:0030178	negative regulation of Wnt signaling pathway	biological_process	regulation of biological process	9	582	61	22257	0.14754098	2.77E-05	0.00879905
GO:0009617	response to bacterium	biological_process	response to stimulus	17	582	209	22257	0.08133971	3.82E-05	0.01077464
GO:0006953	acute-phase response	biological_process	response to stimulus	7	582	39	22257	0.17948718	5.99E-05	0.01520644