

**Table S4. KEGG pathway enrichment.**

High confidence KEGG terms were considered as those with at least 3 associated genes identified from our input list (bolded entries). Based on this criterion, several KEGG pathways including oxidative phosphorylation (Kegg:00190) and ribosome (Kegg:03010) pathways were predicted as being significantly enriched in both Contrast 1 and Contrast 2. However, only the spliceosome pathway (Kegg:03040) was found to be significantly over-represented in Contrast 3.

Items	Items_Details	Support	List size	FoldEnrichment	Hyp	Hyp_c	Genes	GroupContrast
<b>Kegg:00190</b>	<b>Oxidative phosphorylation</b>	<b>3</b>	<b>26</b>	<b>30.4</b>	<b>0.00013</b>	<b>0.000</b>	<b>ATP5H,ATP5E,COX7A2</b>	<b>1 (Norm v GDM)</b>
<b>Kegg:05010</b>	<b>Alzheimer's disease</b>	<b>3</b>	<b>26</b>	<b>24.2</b>	<b>0.00025</b>	<b>0.001</b>	<b>ATP5H,ATP5E,COX7A2</b>	<b>1 (Norm v GDM)</b>
<b>Kegg:05012</b>	<b>Parkinson's disease</b>	<b>3</b>	<b>26</b>	<b>30.6</b>	<b>0.00013</b>	<b>0.001</b>	<b>ATP5H,ATP5E,COX7A2</b>	<b>1 (Norm v GDM)</b>
<b>Kegg:05016</b>	<b>Huntington's disease</b>	<b>3</b>	<b>26</b>	<b>21.9</b>	<b>0.00034</b>	<b>0.001</b>	<b>ATP5H,ATP5E,COX7A2</b>	<b>1 (Norm v GDM)</b>
<b>Kegg:03010</b>	<b>Ribosome</b>	<b>3</b>	<b>26</b>	<b>45.9</b>	<b>0.00004</b>	<b>0.000</b>	<b>RPL24,RPLP2,RPS13</b>	<b>1 (Norm v GDM)</b>
Kegg:03060	Protein export	1	26	57.2	0.01734	0.023	SRP14	1 (Norm v GDM)
<b>Kegg:03010</b>	<b>Ribosome</b>	<b>3</b>	<b>16</b>	<b>74.6</b>	<b>0.00001</b>	<b>0.000</b>	<b>RPL24,RPS27A,RPL5</b>	<b>2 (Norm v Ob)</b>
Kegg:00190	Oxidative phosphorylation	2	16	32.9	0.00166	0.005	ATP5E,COX7A2	2 (Norm v Ob)
Kegg:05010	Alzheimer's disease	2	16	26.2	0.00259	0.006	ATP5E,COX7A2	2 (Norm v Ob)
Kegg:05012	Parkinson's disease	2	16	33.1	0.00164	0.006	ATP5E,COX7A2	2 (Norm v Ob)
Kegg:05016	Huntington's disease	2	16	23.8	0.00315	0.006	ATP5E,COX7A2	2 (Norm v Ob)
Kegg:03060	Protein export	2	16	185.9	0.00005	0.000	SRP9,SRP14	2 (Norm v Ob)
Kegg:04621	NOD-like receptor signaling pathway	1	16	37.5	0.02634	0.041	HSP90B1	2 (Norm v Ob)
Kegg:04260	Cardiac muscle contraction	1	16	28.1	0.03497	0.048	COX7A2	2 (Norm v Ob)
Kegg:05215	Prostate cancer	1	16	24.3	0.04038	0.049	HSP90B1	2 (Norm v Ob)
<b>Kegg:03040</b>	<b>Spliceosome</b>	<b>3</b>	<b>44</b>	<b>19.8</b>	<b>0.00048</b>	<b>0.007</b>	<b>HNRNPA3,HNRNPC,TRA2A</b>	<b>3 (GDM v Ob)</b>