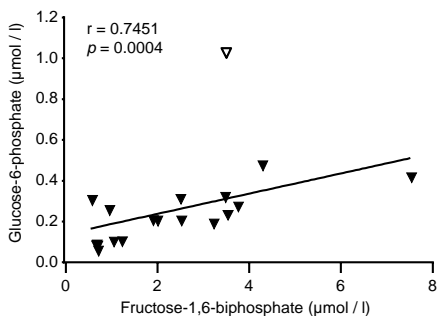


A

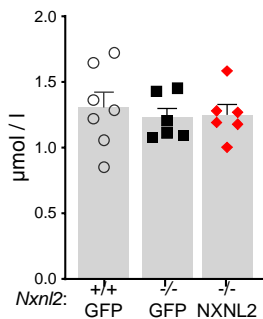
Study ID	Metabolite	AAV-GFP		½ AAV-RdCVF2	Metabolic pathway
		<i>Nxn12</i> ^{+/+} (n = 7) 3♀, 4♂	<i>Nxn12</i> ^{-/-} (n = 6) 3♀, 3♂	<i>Nxn12</i> ^{-/-} (n = 6) 3♀, 3♂	
1	UDP-Glucose (μmol / l)	1.41 +/-0.42	1.49 +/-0.02	1.44 +/- 0.04	Glycogen synthesis
2	Glucose-1-phosphate (μmol / l)	1.30 +/- 0.12	1.23 +/-0.07	1.25 +/-0.08	Glycogenolysis
3	Glucose-6-phosphate (μmol / l)	0.12 +/-0.03	0.26 +/-0.02	0.42 +/-0.13	Glycolysis
4	Fructose-6-phosphate (F6P) (μmol / l)	0.07 +/-0.01	0.15 +/-0.01	0.20 +/-0.04	Glycolysis
5	Mannose-6-phosphate (μmol / l)	0.11 +/- 0.01	0.16 +/-0.01	0.18 +/-0.04	Hexosamine pathway (branching on F6P)
6	UDP-N-acetyl-glucosamine (μmol / l)	1.52 +/-0.03	1.61 +/-0.02	1.61 +/-0.06	Hexosamine pathway
7	GDP-mannose (μmol / l)	0.40 +/-0.02	0.32 +/-0.02	0.27 +/-0.01	Hexosamine pathway
8	Fructose-1,6-biphosphate (μmol / l)	0.96 +/-0.17	2.98 +/-0.29	3.40 +/-1.01	Glycolysis
9	Glycerol-3-phosphate (C12/C13) ³	85.93 +/- 5.33	124.43 +/-10.81	95.90 +/-15.77	Kennedy path. (branching on glycolysis)
10	2/3-Phosphoglycerate (2/3-PG) (μmol / l)	0.46 +/-0.04	0.64 +/-0.06	0.90 +/-0.17	Glycolysis
11	Phospho-serine	ND ¹	ND ¹	ND ¹	Serine synthesis (branching on 3-PG)
12	Phosphoenolpyruvate (μmol / l)	2.20 +/-0.17	2.69 +/-0.17	2.94 +/-0.31	Glycolysis
13	Citrate (C12/C13) ³	6.68 +/-0.55	6.67 +/-0.13	7.26 +/-0.39	Tricarboxylic acid cycle
14	cis-Aconitate (μmol / l)	0.13 +/-0.02	0.06 +/- 0.00	0.09 +/-0.02	Tricarboxylic acid cycle
15	α-Ketoglutarate (C12/C13) ³	0.97 +/-0.05	0.87 +/-0.04	0.93 +/-0.03	Tricarboxylic acid cycle
16	2-Hydroxyglutarate (μmol / l)	ND ¹	ND ¹	ND ¹	Branching from α-Ketoglutarate
17	Succinate (C12/C13) ³	2.27 +/-0.12	2.50 +/-0.12	2.24 +/-0.14	Tricarboxylic acid cycle
18	Fumarate (C12/C13) ³	3.51 +/-0.23	3.77 +/-0.24	3.74 +/-0.12	Tricarboxylic acid cycle
19	Malate (C12/C13) ³	6.13 +/-0.23	5.96 +/-0.16	6.00 +/-0.12	Tricarboxylic acid cycle
20	6-Phosphogluconate (μmol / l)	0.19 +/-0.02	0.19 +/-0.02	0.37 +/-0.06	Pentose phosphate pathway
21	Ribose-1-phosphate (μmol / l)	1.27 +/-0.06	1.03 +/-0.04	1.12 +/-0.09	Pentose phosphate pathway
22	Ribose-5-P + Ribulose-5-P (μmol / l)	ND ¹	ND ¹	ND ¹	Pentose phosphate pathway
23	Rib-5P (μmol / l)	ND ¹	ND ¹	ND ¹	Pentose phosphate pathway
24	Ribulose-5P (μmol / l)	ND ¹	ND ¹	ND ¹	Pentose phosphate pathway
25	Phosphoribosyl diphosphate (μmol / l)	12.80 +/-2.15	8.25 +/-0.91	7.02 +/-0.72	Pentose phosphate pathway
26	Sedoheptulose-7-phosphate (C12/C13) ³	1.29 +/-0.16	1.50 +/-0.12	1.90 +/-0.27	Pentose phosphate pathway
27	AMP (μmol / l)	1.24 +/-0.10	1.24 +/-0.03	2.07 +/-0.82	Nucleotides synthesis
28	ADP (C12/C13) ³	14.10 +/-1.57	18.32 +/-0.74	15.99 +/-1.80	Nucleotides synthesis
29	ATP (C12/C13) ³	20.81 +/-2.82	31.30 +/-1.96	24.33 +/-5.24	Nucleotides synthesis and OXPHO
30	CMP (μmol / l)	0.38 +/-0.03	0.38 +/-0.02	0.38 +/-0.04	Nucleotides synthesis
31	CDP (μmol / l)	0.08 +/-0.00	0.10 +/-0.01	0.10 +/-0.01	Nucleotides synthesis
32	CTP (μmol / l)	LOQ ²	LOQ ²	LOQ ²	Nucleotides synthesis
33	GMP (μmol / l)	2.37 +/-0.16	1.90 +/-0.43	1.88 +/-0.32	Nucleotides synthesis
34	cGMP (μmol / l)	LOQ ²	LOQ ²	LOQ ²	Nucleotides synthesis
35	GDP (μmol / l)	3.27 +/-0.13	3.37 +/-0.19	3.17 +/-0.30	Nucleotides synthesis
36	Orotate (μmol / l)	0.04 +/-0.00	0.04 +/-0.00	0.04 +/-0.00	Nucleotides synthesis
37	UMP (μmol / l)	1.01 +/-0.04	1.04 +/-0.01	1.05 +/-0.04	Nucleotides synthesis
38	UDP (μmol / l)	0.10 +/-0.01	0.14 +/-0.02	0.14 +/-0.03	Nucleotides synthesis
39	UTP (μmol / l)	0.20 +/-0.01	0.22 +/-0.01	0.23 +/-0.02	Nucleotides synthesis

¹ Not detected, ² Limit of quantification, ³ Cannot be directly compared to figure S4A because of difference in the internal standard

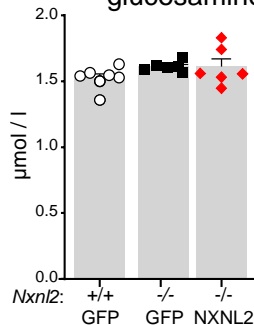
B



C Glucose-1-phosphate



D UDP-N-acetyl glucosamine



E Phosphoribosyl pyrophosphate

