

Supplementary Materials

High glucose induces hypoxanthine accumulation linking hyperglycemia to adipocyte dysfunction

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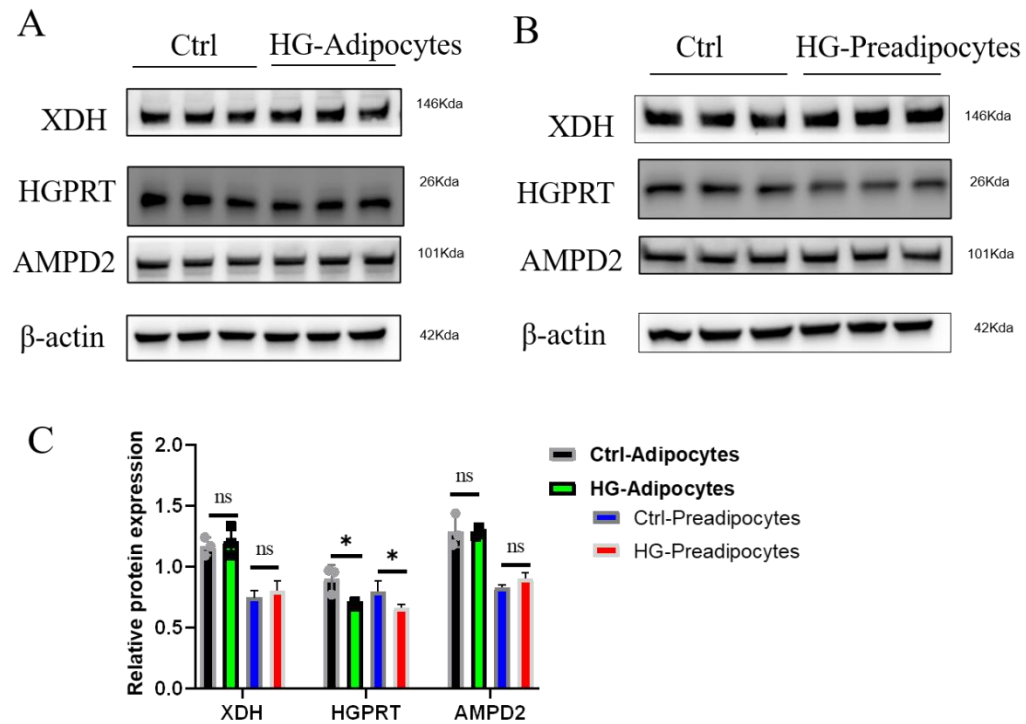
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Supplementary Figure 1. Effects of high glucose on the expression of purine metabolism-related enzymes in preadipocytes and mature adipocytes. Representative Western blot images (A and B) and quantitative analysis (C) showing protein expression levels of XDH, AMPD2, and HGPRT in preadipocytes (Pre, $n = 3$) and mature adipocytes (MA, $n = 3$) cultured under control or high glucose (HG) conditions. β -actin was used as a loading control. Data are presented as mean \pm SEM from at least three independent experiments. Statistical significance was determined using Student's t -test. $*P < 0.05$; ns, not significant. HGPRT expression was significantly decreased by high glucose treatment in both preadipocytes and mature adipocytes, whereas XDH and AMPD2 expression levels remained unchanged. Western blot experiments were performed with biological replicates ($n = 3$).

Supplementary Table 1. Top 10 significantly enriched KEGG pathways in mature white adipocytes treated with hypoxanthine

ID	Term	Classification_level1	Classification_level2	ListHits	ListTotal	PopHits	P value	Q value	Enrichment_score
hsa00350	Tyrosine metabolism	Metabolism	Amino acid metabolism	8	295	36	4.49E-05	0.01	5.89
hsa00900	Terpenoid backbone biosynthesis	Metabolism	Metabolism of terpenoids and polyketides	6	295	22	1.23E-04	0.02	7.23
hsa04512	ECM-receptor interaction	Environmental Information Processing	Signaling molecules and interaction	11	295	88	4.39E-04	0.04	3.31
hsa00010	Glycolysis/Gluconeogenesis	Metabolism	Carbohydrate metabolism	9	295	68	9.53E-04	0.07	3.51
hsa00561	Glycerolipid metabolism	Metabolism	Lipid metabolism	8	295	60	1.73E-03	0.10	3.53
hsa00360	Phenylalanine metabolism	Metabolism	Amino acid metabolism	4	295	17	3.20E-03	0.15	6.24
hsa04210	Apoptosis	Cellular Processes	Cell growth and death	12	295	135	4.87E-03	0.19	2.36
hsa00072	Synthesis and degradation of ketone bodies	Metabolism	Lipid metabolism	3	295	10	5.23E-03	0.19	7.95
hsa03320	PPAR signaling	Organismal Systems	Endocrine system	8	295	76	7.59E-03	0.24	2.79

hsa00330	pathway Arginine and proline metabolism	Metabolism	Amino acid metabolism	6	295	51	1.18E-02	0.33	3.12
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