

# Regulation of Glycogen Synthase by Glucose, Glucosamine, Glutamine:Fructose-6-Phosphate Amidotransferase

Diabetes

44, 314-320

DOI: [10.2337/diab.44.3.314](https://doi.org/10.2337/diab.44.3.314)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Hexosamines and Insulin Resistance. <i>Diabetes</i> , 1996, 45, 1003-1009.	0.3	301
2	An antidiabetic thiazolidinedione potentiates insulin stimulation of glycogen synthase in rat adipose tissues.. <i>Endocrinology</i> , 1996, 137, 1984-1990.	1.4	26
3	Increased Hexosamine Availability Similarly Impairs the Action of Insulin and IGF-1 on Glucose Disposal. <i>Diabetes</i> , 1996, 45, 1734-1743.	0.3	39
4	Increased Glutamine:Fructose-6-Phosphate Amidotransferase Activity in Skeletal Muscle of Patients With NIDDM. <i>Diabetes</i> , 1996, 45, 302-307.	0.3	113
5	Regulation of Glycogen Synthase and Protein Phosphatase-1 by Hexosamines. <i>Diabetes</i> , 1996, 45, 322-327.	0.3	30
6	Acquired Defects of Glycogen Synthase Activity in Cultured Human Skeletal Muscle Cells: Influence of High Glucose and Insulin Levels. <i>Diabetes</i> , 1996, 45, 400-407.	0.3	59
7	O-Linked GlcNAc Transferase Is a Conserved Nucleocytoplasmic Protein Containing Tetratricopeptide Repeats. <i>Journal of Biological Chemistry</i> , 1997, 272, 9316-9324.	1.6	462
8	Effects of overexpression of glutamine:fructose-6-phosphate amidotransferase (GFAT) and glucosamine treatment on translocation of GLUT4 in rat adipose cells. <i>Molecular and Cellular Endocrinology</i> , 1997, 135, 67-77.	1.6	46
9	Glucosamine-induced Insulin Resistance in 3T3-L1 Adipocytes Is Caused by Depletion of Intracellular ATP. <i>Journal of Biological Chemistry</i> , 1998, 273, 20658-20668.	1.6	120
10	Effects of FFA on insulin-stimulated glucose fluxes and muscle glycogen synthase activity in rats. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 1998, 275, E338-E344.	1.8	10
11	Effect of oral glutamine on whole body carbohydrate storage during recovery from exhaustive exercise. <i>Journal of Applied Physiology</i> , 1999, 86, 1770-1777.	1.2	69
12	Glucosamine Regulation of Glucose Metabolism in Cultured Human Skeletal Muscle Cells: Divergent Effects on Glucose Transport/Phosphorylation and Glycogen Synthase in Non-Diabetic and Type 2 Diabetic Subjects1. <i>Endocrinology</i> , 1999, 140, 3971-3980.	1.4	51
13	The Role of Glucose Metabolites in the Activation and Translocation of Glycogen Synthase by Insulin in 3T3-L1 Adipocytes. <i>Journal of Biological Chemistry</i> , 1999, 274, 27497-27504.	1.6	53
14	Discordant Effects of Glucosamine on Insulin-stimulated Glucose Metabolism and Phosphatidylinositol 3-Kinase Activity. <i>Journal of Biological Chemistry</i> , 1999, 274, 31312-31319.	1.6	36
15	Nutrient and hormonal regulation of pyruvate kinase gene expression. <i>Biochemical Journal</i> , 1999, 337, 1.	1.7	47
16	Nutrient and hormonal regulation of pyruvate kinase gene expression. <i>Biochemical Journal</i> , 1999, 337, 1-11.	1.7	167
17	Simultaneous, quantitative analysis of UDP-N-acetylglucosamine, UDP-N-acetylgalactosamine, UDP-glucose and UDP-galactose in human peripheral blood cells, muscle biopsies and cultured mesangial cells by capillary zone electrophoresis. <i>Electrophoresis</i> , 2000, 21, 3010-3015.	1.3	29
18	Structures and Functions of Nuclear and Cytoplasmic Glycoproteins. , 0, , 651-667.		1

#	ARTICLE	IF	CITATIONS
19	Hexosamine regulation of glucose-mediated laminin synthesis in mesangial cells involves protein kinases A and C. <i>American Journal of Physiology - Renal Physiology</i> , 2000, 279, F646-F654.	1.3	26
20	Palmitate oxidation rate and action on glycogen synthase in myoblasts from insulin-resistant subjects. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2000, 279, E561-E569.	1.8	11
21	Overexpression of GFAT activates PAI-1 promoter in mesangial cells. <i>American Journal of Physiology - Renal Physiology</i> , 2000, 279, F718-F727.	1.3	45
22	Transgenic mice with increased hexosamine flux specifically targeted to beta-cells exhibit hyperinsulinemia and peripheral insulin resistance. <i>Diabetes</i> , 2000, 49, 1492-1499.	0.3	77
23	Transcriptional Regulation of Transforming Growth Factor $\beta$ 1 by Glucose: Investigation into the Role of the Hexosamine Biosynthesis Pathway. <i>American Journal of the Medical Sciences</i> , 2000, 319, 138-142.	0.4	1
24	Overexpression of Glutamine:Fructose-6-Phosphate Amidotransferase in Rat-1 Fibroblasts Enhances Glucose-Mediated Glycogen Accumulation via Suppression of Glycogen Phosphorylase Activity*. <i>Endocrinology</i> , 2000, 141, 1962-1970.	1.4	14
25	Overexpression of glutamine: fructose-6-phosphate amidotransferase in the liver of transgenic mice results in enhanced glycogen storage, hyperlipidemia, obesity, and impaired glucose tolerance. <i>Diabetes</i> , 2000, 49, 2070-2078.	0.3	112
26	Glucosamine enhances platelet-derived growth factor-induced DNA synthesis via phosphatidylinositol 3-kinase pathway in rat aortic smooth muscle cells. <i>Atherosclerosis</i> , 2001, 157, 341-352.	0.4	7
27	Angiotensin II activates the GFAT promoter in mesangial cells. <i>American Journal of Physiology - Renal Physiology</i> , 2001, 281, F151-F162.	1.3	32
28	Identification of GFAT1-L, a novel splice variant of human glutamine: fructose-6-phosphate amidotransferase (GFAT1) that is expressed abundantly in skeletal muscle. <i>Journal of Human Genetics</i> , 2001, 46, 566-571.	1.1	33
29	Glucose-induced insulin resistance of phosphatidylinositol 3-OH kinase and AKT/PKB is mediated by the hexosamine biosynthesis pathway. <i>Journal of Diabetes and Its Complications</i> , 2001, 15, 88-96.	1.2	19
30	Exercise-Stimulated Glucose Turnover in the Rat Is Impaired by Glucosamine Infusion. <i>Diabetes</i> , 2001, 50, 139-142.	0.3	10
31	Flux Through the Hexosamine Pathway Is a Determinant of Nuclear Factor $\kappa$ B- Dependent Promoter Activation. <i>Diabetes</i> , 2002, 51, 1146-1156.	0.3	145
32	From Lobry de Bruyn to enzyme-catalyzed ammonia channelling: molecular studies of D-glucosamine-6P synthase. <i>Natural Product Reports</i> , 2002, 19, 60-69.	5.2	46
33	Glucosamine-6-phosphate synthase—the multi-facets enzyme. <i>BBA - Proteins and Proteomics</i> , 2002, 1597, 173-192.	2.1	222
34	In vitro reversal of hyperglycemia normalizes insulin action in fat cells from type 2 diabetes patients: Is cellular insulin resistance caused by glucotoxicity in vivo?. <i>Metabolism: Clinical and Experimental</i> , 2003, 52, 239-245.	1.5	43
35	Insulin Resistance of Glycogen Synthase Mediated by O-Linked N-Acetylglucosamine. <i>Journal of Biological Chemistry</i> , 2003, 278, 10022-10027.	1.6	144
36	Overexpression of the Complementary DNA for Human Glutamine: Fructose-6-Phosphate Amidotransferase in Mesangial Cells Enhances Glucose-Induced Fibronectin Synthesis and Transcription Factor Cyclic Adenosine Monophosphate-Responsive Element Binding Phosphorylation. <i>Journal of Investigative Medicine</i> , 2003, 51, 32-41.	0.7	8

#	ARTICLE	IF	CITATIONS
37	The Cellular Fate of Glucose and Its Relevance in Type 2 Diabetes. <i>Endocrine Reviews</i> , 2004, 25, 807-830.	8.9	273
38	Dynamic Actions of Glucose and Glucosamine on Hexosamine Biosynthesis in Isolated Adipocytes. <i>Journal of Biological Chemistry</i> , 2004, 279, 35313-35319.	1.6	137
39	Glucosamine-induced insulin resistance in L6 muscle cells. <i>Diabetes, Obesity and Metabolism</i> , 2004, 6, 293-298.	2.2	28
40	Glucosamine-induced Activation of Glycogen Biosynthesis in Isolated Adipocytes. <i>Journal of Biological Chemistry</i> , 2005, 280, 11018-11024.	1.6	27
41	Relationship between the adiponectin-leptin ratio and parameters of insulin resistance in subjects without hyperglycemia. <i>Metabolism: Clinical and Experimental</i> , 2006, 55, 1248-1254.	1.5	106
42	Hexosamines regulate sensitivity of glucose-stimulated insulin secretion in $\beta$ -cells. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2006, 290, E334-E340.	1.8	17
43	Oral Glucosamine for 6 Weeks at Standard Doses Does Not Cause or Worsen Insulin Resistance or Endothelial Dysfunction in Lean or Obese Subjects. <i>Diabetes</i> , 2006, 55, 3142-3150.	0.3	58
45	Proposed Regulation of Gene Expression by Glucose in Rodent Heart. <i>Gene Regulation and Systems Biology</i> , 2007, 1, GRSB.S222.	2.3	65
46	Family history of diabetes impacts on interactions between minimal model estimates of insulin sensitivity and glucose effectiveness. <i>Diabetes, Obesity and Metabolism</i> , 2009, 11, 123-130.	2.2	10
47	Influence of glucosamine on glomerular mesangial cell turnover: implications for hyperglycemia and hexosamine pathway flux. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2010, 298, E210-E221.	1.8	8
48	The effect of glucosamine on glucose metabolism in humans: a systematic review of the literature. <i>Osteoarthritis and Cartilage</i> , 2011, 19, 375-380.	0.6	51
49	Dapagliflozin Enhances Fat Oxidation and Ketone Production in Patients With Type 2 Diabetes. <i>Diabetes Care</i> , 2016, 39, 2036-2041.	4.3	155
50	A Genetic Model to Study Increased Hexosamine Biosynthetic Flux. <i>Endocrinology</i> , 2017, 158, 2420-2426.	1.4	5
51	Transcriptional Regulation of Transforming Growth Factor $\beta$ 1 by Glucose: Investigation into the Role of the Hexosamine Biosynthesis Pathway. <i>American Journal of the Medical Sciences</i> , 2020, 359, 79-83.	0.4	22
52	The insulin receptor and metabolic signaling. , 1999, 137, 71-190.		9
53	Transcriptional Regulation of Transforming Growth Factor $\beta$ 1 by Glucose: Investigation into the Role of the Hexosamine Biosynthesis Pathway. <i>American Journal of the Medical Sciences</i> , 2000, 319, 138-142.	0.4	46
54	Glutamine:fructose-6-phosphate amidotransferase activity in cultured human skeletal muscle cells: relationship to glucose disposal rate in control and non-insulin-dependent diabetes mellitus subjects and regulation by glucose and insulin.. <i>Journal of Clinical Investigation</i> , 1996, 97, 1235-1241.	3.9	74
55	Overexpression of glutamine:fructose-6-phosphate amidotransferase in transgenic mice leads to insulin resistance.. <i>Journal of Clinical Investigation</i> , 1996, 98, 930-936.	3.9	279

#	ARTICLE	IF	CITATIONS
57	Skeletal Muscle Insulin Resistance in Humans: Cellular Mechanisms. , 1999, , 179-195.		0
58	Nutrient and hormonal regulation of pyruvate kinase gene expression. Biochemical Journal, 1999, 337 ( ) Tj ETQq1 1,0.784314,rgBT /Ove	1.7	55