Glycogen Synthase (GYS1) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Glycogen Synthase (GYS1), Polyclonal Antibody
Full Product Name	Glycogen Synthase (Phospho-Ser645) Antibody
Product Gene Name	anti-GYS1 antibody
Product Synonym Names	glycogen [starch] synthase; glycogen synthase; GYS
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	Antibodies were produced by immunizing rabbits with synthetic phosphopeptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. Non-phospho specific antibodies were removed by chromatogramphy usi
Specificity	The antibody detects endogenous level of Glycogen Synthase only when phosphorylated at serine 645.
Preparation and Storage	Store at 4 degree C short term. Aliquot and store at -20 degree C long term. Avoid freeze/thaw cycles.
Molecular Weight	83,786 Da
Chromosome Location	Chromosome: 19; NC_000019.9 (49471382..49496610, complement). Location: 19q13.3
OMIM	138570
3D Structure	ModBase 3D Structure for P13807
Immunogen	Peptide sequence around phosphorylation site of serine 645 (P-P-S (p)-P-S) derived from Glycogen Synthase.
Product Categories/Family for anti-GYS1 antibody	Primary Antibody
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-GYS1 antibody	Western Blot (WB)
Application Notes for anti-GYS1 antibody	WB: 1:500~1:1000
Related Product Information for anti-GYS1 antibody	Transfers the glycosyl residue from UDP-Glc to the non-reducing end of alpha-1,4-glucan.
Product References and Citations for anti-GYS1 antibody	Jensen J, et al. (2012)Am J Physiol Endocrinol Metab 303, E82-9. Lin FC, et al. (2012) Am J Physiol Cell Physiol 302, C1539-47. Kelsall IR, et al. (2011)J Neurochem 118, 596-610
Other Notes	Small volumes of anti-GYS1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for GYS1 purchase	MBS8585228 is an antibody targeting GYS1. Also known as Glycogen Synthase (Phospho-Ser645) Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for GYS1. It may not necessarily be applicable to this product.

NCBI GI #	239049591
NCBI GeneID	2997
NCBI Accession #	NP_001155059.1
UniProt Primary Accession #	P13807
UniProt Secondary Accession #	Q9BTT9
UniProt Related Accession #	P13807
GenBank Nucleotide #	NM_001161587.1
NCBI Official Full Name	glycogen
NCBI Official Synonym Full Names	glycogen synthase 1 (muscle)
NCBI Official Symbol	GYS1
NCBI Official Synonym Symbols	GSY; GYS
UniProt Protein Name	Glycogen [starch] synthase, muscle
Protein Family	Glycogen [starch] synthase
UniProt Gene Name	GYS1
UniProt Synonym Gene Names	GYS
UniProt Entry Name	GYS1_HUMAN
NCBI Protein Information	glycogen [starch] synthase, muscle; glycogen [starch] synthase, muscle
NCBI Summary for GYS1	The protein encoded by this gene catalyzes the addition of glucose monomers to the growing glycogen molecule through the formation of alpha-1,4-glycoside linkages. Mutations in this gene are associated with muscle glycogen storage disease. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.[provided by RefSeq, Sep 2009]
UniProt Comments for GYS1	GYS1: muscle glycogen synthase 1. Transfers glucosyl residue from UDP-glucose to glycogen. Regulated allosterically by glucose-6-phosphate, and by PKA-mediated phosphorylation. Protein type: EC 2.4.1.11; Transferase; Carbohydrate Metabolism - starch and sucrose Chromosomal Location of Human Ortholog: 19q13.3 Cellular Component: membrane; cytoplasm; inclusion body; cytosol Molecular Function: protein binding; glycogen (starch) synthase activity; protein kinase binding; glucose binding Biological Process: glycogen biosynthetic process; heart development; carbohydrate metabolic process; glucose metabolic process; pathogenesis Disease: Glycogen Storage Disease 0, Muscle
Research Articles on GYS1	**1.** Data suggest that although COOH-terminal dephosphorylation is likely necessary for GS activation, protein kinase Akt-2- (Akt2)-dependent NH2-terminal dephosphorylation is site for "fine-tuning" insulin-mediated GS activation in skeletal muscle.
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