

Product Name: Glycogen Synthase 1 (phospho Ser645) Rabbit Polyclonal Antibody
Catalog #: APRab04739

For research use only.

Summary

Description	Rabbit polyclonal Antibody
Host	Rabbit
Application	WB,IHC,ICC/IF,ELISA
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Phosphorylated
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:5000-1:10000
Molecular Weight	83kDa

Antigen Information

Gene Name	GYS1
Alternative Names	GYS1; GYS; Glycogen [starch] synthase; muscle
Gene ID	2997.0
SwissProt ID	P13807
Immunogen	The antiserum was produced against synthesized peptide derived from human Glycogen Synthase around the phosphorylation site of Ser645. AA range:611-660

Background

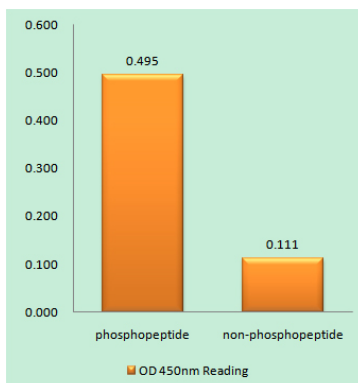
The protein encoded by this gene catalyzes the addition of glucose monomers to the growing glycogen molecule through the

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],catalytic activity:UDP-glucose ((1->4)-alpha-D-glucosyl)(n) = UDP + ((1->4)-alpha-D-glucosyl)(n+1).,disease:Defects in GYS1 are the cause of muscle glycogen storage disease type 0 (GSD0b) [MIM:611556]; also called muscle glycogen synthase deficiency. GSD0 is a metabolic disorder characterized by fasting hypoglycemia presenting in infancy or early childhood. The role of muscle glycogen is to provide critical energy during bursts of activity and sustained muscle work.,enzyme regulation:Allosteric activation by glucose-6-phosphate. Phosphorylation reduces the activity towards UDP-glucose. When in the non-phosphorylated state, glycogen synthase does not require glucose-6-phosphate as an allosteric activator; when phosphorylated it does.,function:Transfers the glycosyl residue from UDP-Glc to the non-reducing end of alpha-1,4-glucan.,pathway:Glycan biosynthesis; glycogen biosynthesis.,similarity:Belongs to the glycosyltransferase 3 family.,

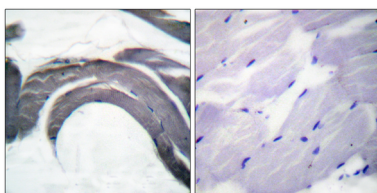
Research Area

Starch and sucrose metabolism;Insulin_Receptor;

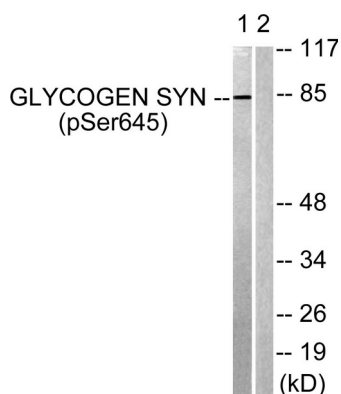
Image Data



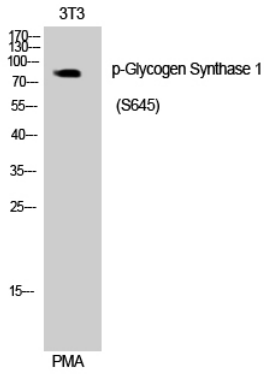
Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right) , using Glycogen Synthase (Phospho-Ser645) Antibody



Immunohistochemistry analysis of paraffin-embedded human skeletal muscle, using Glycogen Synthase (Phospho-Ser645) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from NIH/3T3 cells treated with PMA 125ng/ml 30', using Glycogen Synthase (Phospho-Ser645) Antibody. The lane on the right is blocked with the phospho peptide.



Western Blot analysis of 293 cells using Phospho-Glycogen Synthase 1 (S645) Polyclonal Antibody