

Datasheet for ABIN99926

anti-Glycogen Synthase 1 antibody (pSer640)**3** Images[Go to Product page](#)

Overview

Quantity:	100 µg
Target:	Glycogen Synthase 1 (GYS1)
Binding Specificity:	pSer640
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Glycogen Synthase 1 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunoprecipitation (IP)

Product Details

Immunogen:	Human Muscle Glycogen Synthase phospho peptide corresponding to a region of the human protein conjugated to Keyhole Limpet Hemocyanin (KLH).
Isotype:	IgG
Characteristics:	Concentration Definition: by UV absorbance at 280 nm

Target Details

Target:	Glycogen Synthase 1 (GYS1)
Alternative Name:	Glycogen Synthase 1 (GYS1 Products)
Background:	Anti-Glycogen synthase 1 pS640 is validated by IHC, Western Blot and ELISA. Human muscle glycogen synthase (GS) is responsible for the biosynthesis of glycogen from phosphorylated glucose units. Mammalian liver and muscle contain GS consisting of four subunits with a total

Target Details

molecular weight of 360,000. GS is subject to regulation through both allosteric and covalent modification and occurs in two forms: the phosphorylated inactive form, and the dephosphorylated active form. GS is inactivated by the serine/threonine kinase called glycogen synthase kinase-3b that mainly functions to phosphorylate muscle glycogen synthase. This antibody is specific for the phosphorylated form of GS at S640. Phosphorylation of GS at S640 has been associated with Antiphospholipid Antibody Syndrome.

Synonyms: Glycogen antibody, Glycogen synthase 1 (muscle) antibody, Glycogen synthase 1 antibody, Glycogen synthase1 antibody, GSY antibody, GYS 1 antibody, GYS antibody, GYS1 antibody, Starchsynthase muscle antibody

Gene ID: 2997

UniProt: [P13807](#)

Pathways: [PI3K-Akt Signaling](#), [AMPK Signaling](#), [Cellular Glucan Metabolic Process](#)

Application Details

Application Notes: This phospho specific polyclonal antibody was tested by immunoblotting and ELISA. By ELISA the antibody was found to be reactive with the phosphorylated form of the immunizing peptide and minimally reactive with the non-phosphorylated form of the immunizing peptide. Immunoblotting will detect human and mouse muscle glycogen synthase. Although not tested, this antibody is likely functional in immunohistochemistry and immunoprecipitation.

Restrictions: For Research Use only

Handling

Format: Liquid

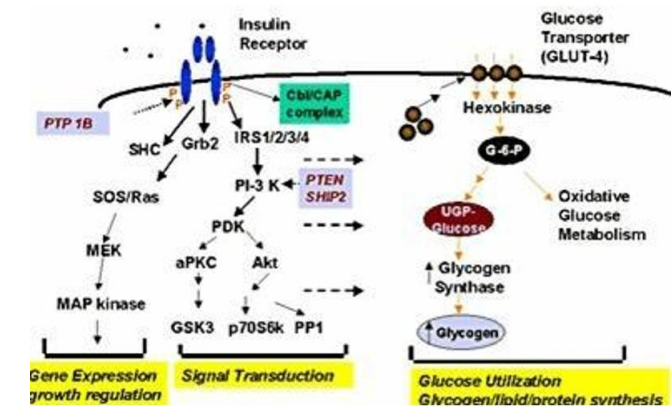
Concentration: 1.0 mg/mL

Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Preservative: Sodium azide

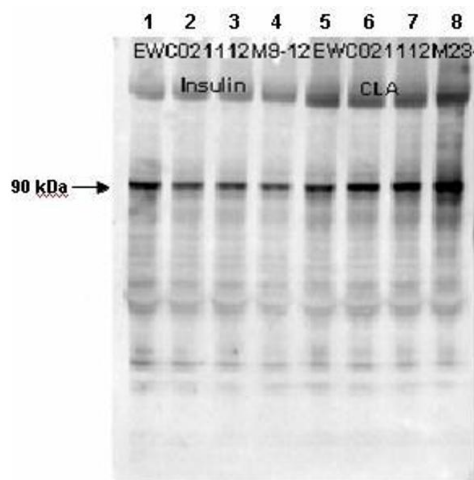
Precaution of Use: This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: -20 °C



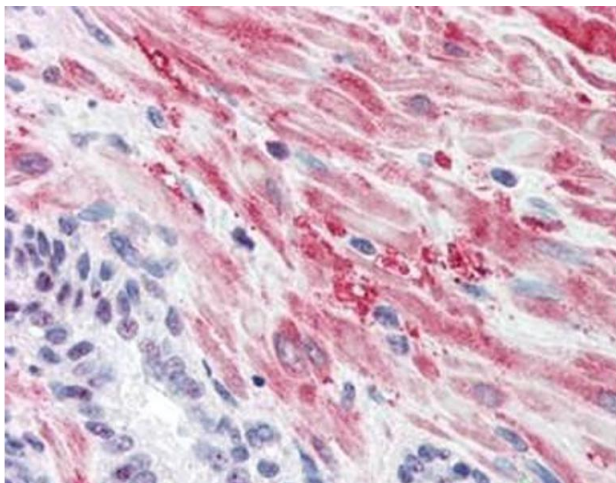
Western Blotting

Image 1. Affinity Purified Phospho-specific antibody to human muscle Glycogen Synthase (GS) at pS640 was used at a 1:1000 dilution to detect human muscle GS by Western blot. Approximately 12 ul of a mouse cardiac myocyte lysate was loaded per lane on a 4-20% Criterion gel for SDS-PAGE. Samples were either mock treated (lanes 1 and 5) or insulin treated at 10 nM, 100 nM and 1 μ M (lanes 2, 3 and 4 respectively) for 15' or CLA treated at 4nM, 20 nM or 100 nM (lanes 6,7 and 8 respectively) for 45'. After washing, a 1:5,000 dilution of HRP conjugated Gt-a-Rabbit IgG (611-103-122) preceded color development using Amersham's substrate system. Other detection methods will yield similar results.



Western Blotting

Image 2. Affinity Purified Phospho-specific antibody to human muscle Glycogen Synthase (GS) at pS640 was used at a 1:1000 dilution to detect human muscle GS by Western blot. Approximately 12 ul of a mouse cardiac myocyte lysate was loaded per lane on a 4-20% Criterion gel for SDS-PAGE. Samples were either mock treated (lanes 1 and 5) or insulin treated at 10 nM, 100 nM and 1 μ M (lanes 2, 3 and 4 respectively) for 15' or CLA treated at 4nM, 20 nM or 100 nM (lanes 6,7 and 8 respectively) for 45'. After washing, a 1:5,000 dilution of HRP conjugated Gt-a-Rabbit IgG preceded color development using Amersham's substrate system. Other detection methods will yield similar results.



Immunohistochemistry

Image 3. Immunohistochemistry with Anti-Glycogen Synthase antibody Tissue: Human Prostate Fixation: formalin-fixed, paraffin-embedded tissue Antigen retrieval: heat-induced Primary antibody: 5 µg/ml Staining: antibody as precipitated red signal with a hematoxylin purple nuclear counterstain.