SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

[Primary Antibody]

Rabbit Anti-Glycogen synthase 1 antibody

Catalog Number: SL2359R

FOR RESEARCH USE ONLY

[DATASHEET]

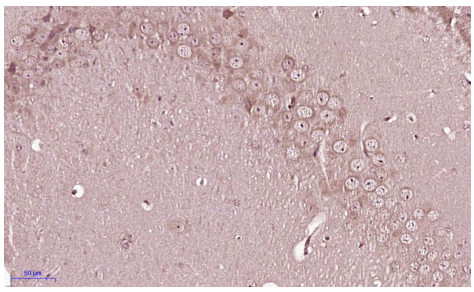
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Glycogen synthase 1
Immunogen:	KLH conjugated synthetic peptide derived from human Glycogen synthase 1: 351-450/737
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	IHC-P=1:100-500 IHC-F=1:100-500 IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Mouse(predicted:Human,Rat,Pig,Cow,Horse,Rabbit)
Predicted MW.:	81kDa
Subcellular Location:	cytoplasmic
Background:	Glycogen Synthase (GS) is a key enzyme in the regulation of glycogen metabolism. GS catalyzes the incorporation of UDP-glucose incorporation into glycogen. The activity of glycogen synthase is regulated by hormonal stimuli (insulin, catecholamines and glucagons) and non-hormonal stimuli (blood glucose level and exercise). Two main isoforms of mammalian GS are designated as muscle (glycogen synthase 1) and liver (glycogen synthase 2). Most tissues express glycogen synthase 1, whereas glycogen synthase 2 appears to be tissue-specific. The two isoforms have 70% identical amino acid sequence. Glycogen synthase can be phosphorylated by multiple kinases including glycogen synthase kinase-3 (GSK-3), mitogen-activated protein kinase-related protein kinase (DYRK), and SAPK2b/p38b which leads to its inactivation.

Important Note: This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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	Function: Transfers the glycosyl residue from UDP-Glc to the non-reducing end of alpha-1,4-glucan. **Subunit:** Interacts with GYG1. **Post-translational modifications:** Phosphorylation at Ser-8 by AMPK inactivates the enzyme activity. Primed phosphorylation at Ser-657 (site 5) by CSNK2A1 and CSNK2A2 is required for inhibitory phosphorylation at Ser-641 (site 3a), Ser-645 (site 3b), Ser-649 (site 3c) and Ser-653 (site 4) by GSK3A an GSK3B (By similarity). Phosphorylated at Ser-641 by PASK, leading to inactivation; phosphorylation by PASK is inhibited by glycogen. Dephosphorylation at Ser-641 and Ser-645 by PP1 activates the enzyme. DISEASE: Defects in GYS1 are the cause of muscle glycogen storage disease type 0 (GSD0b) [MIM:611556]; 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. **Similarity:** Belongs to the glycosyltransferase 3 family. **Database links:** **Entrez Gene:** 2997 Human **Entrez Gene:** 14936 Mouse **Entrez Gene:** 690987 Rat Omim: 138570 Human **SwissProt:** P13807 Human **SwissProt:** Q8VEB0 Mouse **SwissProt:** Q9Z1E4 Mouse **SwissProt:** A2RRU1 Rat **Unigene:** 386225 Human **Unigene:** 275654 Mouse **Unigene:** 95278 Rat

[VALIDATION IMAGES]



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Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Glycogen) Polyclonal Antibody, Unconjugated (SL2359R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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