

# Immunotag™ Glycogen Synthase 1 Monoclonal Antibody

| Antibody Specification |                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| Catalog No.            | ITM0310                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Product Description    | Immunotag™ Glycogen Synthase 1 Monoclonal Antibody                                                                                                                                                                                                                                                                                                                                                                         |
| Size                   | 50 µg, 100 µg                                                                                                                                                                                                                                                                                                                                                                                                              |
| Conjugation            | HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647                                                                                                                                                                                                                                                                                              |
| IMPORTANT NOTE         | This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return.                                                                                                                                                                                                                                                         |
| Target Protein         | Glycogen Synthase 1                                                                                                                                                                                                                                                                                                                                                                                                        |
| Clonality              | Monoclonal                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Storage/Stability      | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                                                                               |
| Application            | WB,FCM,ELISA                                                                                                                                                                                                                                                                                                                                                                                                               |
| Recommended Dilution   | Western Blot: 1/500 - 1/2000. Flow cytometry: 1/200 - 1/400. ELISA: 1/10000. Not yet tested in other applications.                                                                                                                                                                                                                                                                                                         |
| Concentration          | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Reactive Species       | Human                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Host Species           | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Immunogen              | Purified recombinant fragment of human Glycogen Synthase 1 expressed in E. Coli.                                                                                                                                                                                                                                                                                                                                           |
| Specificity            | Glycogen Synthase 1 Monoclonal Antibody detects endogenous levels of Glycogen Synthase 1 protein.                                                                                                                                                                                                                                                                                                                          |
| Purification           | Affinity purification                                                                                                                                                                                                                                                                                                                                                                                                      |
| Form                   | Ascitic fluid containing 0.03% sodium azide.                                                                                                                                                                                                                                                                                                                                                                               |
| Gene Name              | GYS1                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Accession No.          | P13807 Q9Z1E4                                                                                                                                                                                                                                                                                                                                                                                                              |
| Alternate Names        | GYS1; GYS; Glycogen [starch] synthase; muscle                                                                                                                                                                                                                                                                                                                                                                              |
| Description            | glycogen synthase 1(GYS1) Homo sapiens 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], |

## Antibody Specification

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| Cell Pathway/<br>Category   | Starch and sucrose metabolism,Insulin_Receptor,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Protein<br>Expression       | Endometrium,Heart,Kidney,Lymph,Muscle,Skin,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Subcellular<br>Localization | cytosol,membrane,inclusion body,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Protein Function            | <p>catalytic activity:UDP-glucose ((1-&gt;4)-alpha-D-glucosyl)(n) = UDP + ((1-&gt;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.,</p> |
| Usage                       | For Research Use Only! Not for diagnostic or therapeutic procedures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |