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Human Glycogen Phosphorylase - Purified

Catalog No.: PA1258X

Quantity: 20 µg

Concentration: 0.8 mg/ml

Background: Glycogen Phosphorylase is an enzyme that catalyzes the degradation of Glycogen in animals by releasing glucose-1-phosphate from the terminal alpha-1,4-glycosidic bond. This enzyme exists in two forms: an active phosphorylated form (Phosphorylase A) and an inactive un-phosphorylated form (Phosphorylase B).
Both a and b forms of phosphorylase exist as homodimers. In mammals, the major isozymes of glycogen phosphorylase are found in muscle, liver and brain tissue. Glycogen Phosphorylase- a sensitive marker for the AMI diagnosis within 4 hours after the onset of chest pain. It has also been shown that GPBB is increased in a considerable proportion of AMI patients within 2-3 hours from chest pain onset. GPBB is increased early in patients with unstable angina. Glycogen Phosphorylase can also be used as a sensitive marker for the detection of peri-operative myocardial ischaemia and infarction in patients undergoing coronary artery bypass grafting.

Species: Human

Source: E. coli

Format: **State:** Sterile filtered, colourless liquid. Each mg of protein contains 50% glycerol.
Purity: ›85% Greater than 85.0% as determined by:
(a) Analysis by RP-HPLC
(b) Analysis by reducing and non-reducing SDS-PAGE Silver Stained
Dimers: Less than 1% as determined by silver-stained SDS-PAGE gel analysis

Applications: Immunoassays and Western blot.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Description: Recombinant Human Glycogen Phosphorylase produced in E. coli is a single, non-glycosylated, polypeptide chain having a molecular mass of 97 kDa. Recombinant Glycogen Phosphorylase is purified by proprietary chromatographic techniques.
Molecular weight: 97 kDa

Storage: Recombinant Glycogen Phosphorylase, although stable at 10°C for 1 week, should be stored below -18°C.
Please avoid freeze-thaw cycles.
Shelf life: one year from despatch.

General Readings:
1. Yu LJ, Chen Y, Treadway JL, McPherson RK, McCoid SC, Gibbs EM, et al. Establishment of correlation between in vitro enzyme binding potency and in vivo pharmacological activity: application to liver glycogen phosphorylase a inhibitors. J Pharmacol Exp Ther. 2006 Jun;317(3):1230-7. Epub 2006 Mar 14. PubMed PMID: 16537796.

2. Jakobs S, Fridrich D, Hofem S, Pahlke G, Eisenbrand G. Natural flavonoids are potent inhibitors of glycogen phosphorylase. Mol Nutr Food Res. 2006 Jan;50(1):52-7. PubMed PMID: 16317787.
3. Eronina TB, Chebotareva NA, Kurganov BI. Influence of osmolytes on inactivation and aggregation of muscle glycogen phosphorylase b by guanidine hydrochloride. Stimulation of protein aggregation under crowding conditions. Biochemistry (Mosc). 2005 Sep;70(9):1020-6. PubMed PMID: 16266274.
4. Furukawa S, Murakami K, Nishikawa M, Nakayama O, Hino M. FR258900, a novel glycogen phosphorylase inhibitor isolated from Fungus No. 138354. II. Anti-hyperglycemic effects in diabetic animal models. J Antibiot (Tokyo). 2005 Aug;58(8):503-6. PubMed PMID: 16266121.
5. FR258900, a novel glycogen phosphorylase inhibitor isolated from Fungus No. 138354. I. Taxonomy, fermentation, isolation and biological activities. J Antibiot (Tokyo) 2005 Aug;58(8):497-502
6. Wen X, Zhang P, Liu J, Zhang L, Wu X, Ni P, et al. Pentacyclic triterpenes. Part 2: Synthesis and biological evaluation of maslinic acid derivatives as glycogen phosphorylase inhibitors. Bioorg Med Chem Lett. 2006 Feb;16(3):722-6. Epub 2005 Oct 21. PubMed PMID: 16246555.