Glypican-3/GPC3 Protein, Cynomolgus (HEK293, His)

Cat. No.:	HY-P78304
Synonyms:	GPC3; DGSX; Glypican 3; GTR2-2; MXR7; OCI5; OCI-5; SGB; SGBS; SGBS1SDYS; SDYS; SGBS1
Species:	Cynomolgus
Source:	HEK293
Accession:	XP_005594665 (Q25-H559)
Gene ID:	102137748
Molecular Weight:	Approximately 42 kDa & 70-135 kDa

PROPERTIES

Biological Activity	Immobilized Cynomolgus GPC3, His Tag at 0.5μg/ml (100μl/well) on the plate. Dose response curve for Anti-GPC3 Antibody, hFc Tag with the EC_{50} of 18.7ng/ml determined by ELISA.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Normally 5% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

GPC3 is a member of the heparan sulfate proteoglycans (HSPGs), and attaches to the cell surface by a glycosylphosphatidylinositol anchor. GPC3 is overexpressed in hepatocellular carcinoma (HCC) and can be used as a tumor marker for HCC. GPC3 plays a role in liver carcinogenesis[1]. Specifically, Membrane GPC3 can interact with several growth factors (eg: Wnt, Hedgehogs, bone morphogenetic factors, and FGF) to promote the binding of growth factors to their receptors. GPC3 can form a complex with Wnt and activates Wnt signaling, leading to the HCC growth[2].

In addition, GPC3 can regulate cell growth. GPC3 is highly expressed in mesodermal embryonic tissues, and the deletion of the GPC3 gene is involved in the pathogenesis of Simpson-Golabi-Behmel overgrowth syndrome. The interaction of GPC3 with IGF2 can reduce IGF2-mediated growth in vivo, which indicates that GPC3 negatively regulates embryonic and fetal development. Besides, GPC3 is a negative transcriptional regulator and tumor suppressor that inhibits the growth of breast, ovary, and lung cancer cells[2][3].

GPC3 has a cleavage site between Arg358 and Ser359, and can be cleaved by Furin protease[2].

Caution: Product has not been fully validated for medical applications. For research use only.

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