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

Cat. No.:	HY-P70872
Synonyms:	Glypican-3; GTR2-2; Intestinal protein OCI-5; MXR7; GPC3; OCI5
Species:	Mouse
Source:	HEK293
Accession:	Q8CFZ4 (Q25-M557)
Gene ID:	14734
Molecular Weight:	40&72-150 kDa

PROPERTIES

AA Sequence

QPPPPPDATC HQVRSFFQRL QPGLKWVPET PVPGSDLQVC
LPKGPTCCSR KMEEKYQLTA RLNMEQLLQS ASMELKFLII
QNAAVFQEAF EIVVRHAKNY TNAMFKNNYP SLTPQAFEFV
GEFFTDVSLY ILGSDINVDD MVNELFDSLF PVIYTQMMNP
GLPESVLDIN ECLRGARRDL KVFGSFPKLI MTQVSKSLQV
TRIFLQALNL GIEVINTTDH LKFSKDCGRM LTRMWYCSYC
QGLMMVKPCG GYCNVVMQGC MAGVVEIDKY WREYILSLEE
LVNGMYRIYD MENVLLGLFS TIHDSIQYVQ KNGGKLTTTI
GKLCAHSQQR QYRSAYYPED LFIDKKILKV AHVEHEETLS
SRRRELIQKL KSFINFYSAL PGYICSHSPV AENDTLCWNG
QELVERYSQK AARNGMKNQF NLHELKMKGP EPVVSQIIDK
LKHINQLLRT MSVPKGKVLD KSLDEEGLES GDCGDDEDEC
IGSSGDGMVK VKNQLRFLAE LAYDLDVDDA PGNKQHGNQK
DNEITTSHSV GNM

Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, 5% Trehalose, pH 7.4.
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	Glypican-3 (GPC3) Protein, a cell surface proteoglycan, intricately regulates signaling pathways crucial for developmental processes. It negatively modulates the hedgehog signaling pathway by competing with the hedgehog receptor PTC1 for binding to hedgehog proteins, leading to complex internalization and subsequent lysosomal degradation. Conversely, GPC3 exerts positive regulation on both canonical and non-canonical Wnt signaling pathways. In the canonical Wnt pathway, it binds to the Wnt receptor Frizzled, enhancing the interaction between Frizzled and Wnt ligands. GPC3 also binds to CD81, reducing the availability of free CD81 for binding to the transcriptional repressor HHEX, resulting in nuclear translocation of HHEX and transcriptional repression. Additionally, GPC3 inhibits the dipeptidyl peptidase activity of DPP4. Functionally, GPC3 plays essential roles in limb patterning, skeletal development, renal branching morphogenesis, coronary vascular development, and cell movements during gastrulation. This multifaceted protein exists as a heterodimer formed by disulfide linkage and interacts with various molecules, including DPP4, FGF2, WNT5A, WNT3A, WNT7B, hedgehog proteins SHH and IHH, and Wnt receptors FZD4, FZD7, and FZD8, highlighting its central role in developmental processes.

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