

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived		
	Human Glypican 4 (Ala23-Ser529) Accession # O75487	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Ala23 & Ser355		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	84 kDa		

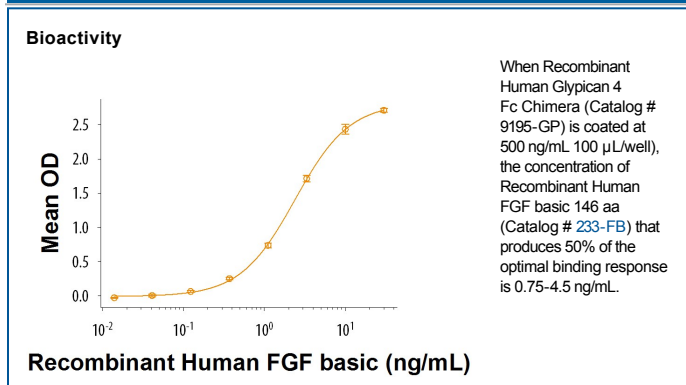
SPECIFICATIONS

Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human Glypican 4 Fc Chimera is coated at 500 ng/mL (100 µL/well), the concentration of recombinant human FGF basic that produces 50% of the optimal binding response is 0.75-4.5 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS and NaCl. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA



BACKGROUND

Glypican 4, also known as K-Glypican, is an approximately 220 kDa GPI-anchored heparan sulfate proteoglycan with a 60 kDa protein core (1, 2). It is expressed in brain, kidney, adrenal gland, and fat tissue (1, 3) and binds to basic FGF (2). Mature human Glypican 4 shares 97% and 96% amino acid (aa) sequence identity with mouse and rat Glypican 4, respectively. An alternative splice isoform lacks the N-terminal 70 aa including the signal peptide. In the developing brain, Glypican 4 is found in lateral ventricles surrounding the telencephalon, the dentate gyrus, proliferating neuroepithelial cells, and neural precursors (1, 2). It inhibits the dopaminergic differentiation of neurons (4). A 30 kDa cleaved form of Glypican 4 binds in cis to PTP sigma and contributes to excitatory synapse development and function (5). Glypican 4 is differentially expressed between adipose tissue depots (3). A soluble form can be released by adipocytes and circulates at elevated levels in obese patients with insulin resistance (3, 6). This form binds and enhances signaling through the Insulin R, and it also supports adipocyte differentiation (3). In zebrafish, Glypican 4 is required for cartilage formation and cardiomyocyte differentiation (7, 8).

References:

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7. Sisson, B.E. *et al.* (2015) *Mech. Dev.* **138**:279.
8. Strate, I. *et al.* (2015) *Development* **142**:1767.