

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived		
	Mouse Frizzled-1 (Gln72 - His248) with substitution Met122Ile Accession # O70421	IEGRMD	Human IgG1 (Pro100 - Lys330)
	N-terminus		C-terminus

N-terminal Sequence Analysis	No results obtained: Gln 72 predicted & Ala74
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	46 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	55-62 kDa, reducing conditions
Activity	Measured by its ability to bind biotinylated Wnt-3a in a functional ELISA with an estimated $K_D < 10$ nM.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 µg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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.

BACKGROUND

Frizzled-1 is one of at least ten seven-transmembrane (7TM) glycoproteins of the Frizzled family of Wnt receptors (1 - 4). Frizzled proteins are thought to be G-protein-coupled (1, 5). Wnt engagement, with low density lipoprotein receptor-related proteins LRP-5 or LRP-6 acting as co-receptors, stabilizes β-catenin and promotes gene transcription that is important in development and tissue maintenance (1). Frizzled-1 can also act as a Wnt antagonist, for example, when sequestered from LRP-5/6 by LRP-1 (6, 7). Mouse Frizzled-1 cDNA encodes 642 aa including a 68 aa signal peptide, an extracellular cysteine-rich domain (CRD, aa 106 - 225) that binds Wnts and is highly conserved among Frizzleds, a linker region, the 7TM region, and the C-terminal cytoplasmic domain (2, 3). Most Frizzleds, including Frizzled-1, contain a C-terminal PDZ binding motif (1). Within aa 72 - 248, mouse Frizzled-1 shares 94%, 97%, 97% and 93% aa identity with human, rat, bovine and canine Frizzled-1, respectively. Frizzleds can form homodimers or selective hetero-oligomers with other family members, which can involve the TM regions and possibly the CRD (1, 8). Frizzled-1 shares high aa identity (~76%) with Frizzled-2 and -7, but may differ in expression and Wnt selectivity (4, 9). Specifically, Wnt-3a interaction with rat Frizzled-1, but not Frizzled-2, blocks toxicity of the Alzheimers Aβ peptide on PC12 cells (9). In bone, Frizzled-1 may be part of a feedback mechanism to modulate the effects of BMP-2 on mesenchymal cells (7, 10). Frizzled-1 is also one of the purported Wnt10b receptors whose signaling inhibits adipocyte differentiation (11). It is widely expressed, with mRNA detection in adult heart, placenta, lung, kidney, pancreas, prostate, and ovary, and in fetal lung and kidney (2, 3).

References:

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