

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived		
	Mouse Frizzled-5 (Ala27-Pro167) Accession # Q9EQD0	IEGRMD	Mouse IgG _{2a} (Glu98-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Ala27		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	43 kDa		

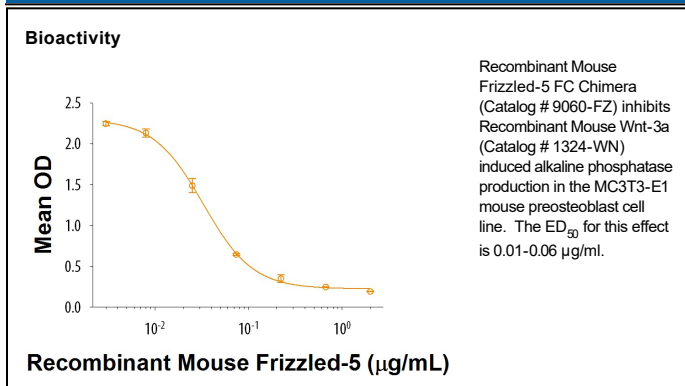
SPECIFICATIONS

SDS-PAGE	54-64 kDa, reducing conditions
Activity	Measured by its ability to inhibit Wnt-3a-induced alkaline phosphatase production by MC3T3-E1 mouse preosteoblast cells. The ED ₅₀ for this effect is 10-60 ng/ml in the presence of 5 ng/mL of Recombinant Mouse Wnt-3a (Catalog # 1324-WN).
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. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 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

Frizzled-5 is an approximately 62 kDa 7-TM glycoprotein that is one of at least ten Frizzled family Wnt receptors (1, 2). Wnt engagement of Frizzled, 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). Frizzleds can also signal through non-canonical pathways independently of LRPs (1). Mature mouse Frizzled-5 consists of a 212 amino acid (aa) extracellular domain (ECD), a 283 aa 7-TM region, and a 64 aa cytoplasmic domain with a PDZ binding motif (2, 3). The ECD includes a cysteine-rich region (CRD) that binds Wnts and is highly conserved among Frizzled proteins (1, 2, 4). Within the N-terminal ECD, human Frizzled-5 shares 95% aa sequence identity with mouse and rat Frizzled-5. Frizzled-5 is expressed in embryonic tissues (telencephalon, pituitary, thalamus, hypothalamus, eye, liver, spleen, lung, and kidney), in the adult retina, colon, and pancreatic islets, some cancer cell lines, human embryonic stem cells, and in some monocyte and lymphocyte populations (2-8). Frizzled-5 functions as a receptor for Wnt-5a, Wnt-9b, Wnt-10b, Wnt-2b, and Wnt-7a (3, 5, 9, 10). It plays a role in the maintenance of yolk sac and placental vasculature (Ishikawa) and in the regression of vitreous vasculature during eye development (5, 6, 11). It mediates the synaptogenic effect of Wnt-7a, contributes to the development of neuronal polarity, and is required for neuronal survival in the thalamus (3, 12, 13). In macrophages and monocytes, Frizzled-5 signaling induces the production of inflammatory cytokines (7, 8).

References:

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