

Active Recombinant Human FZD7 Protein, Fc-tagged

Cat. No. FZD7-537H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human FZD7(Gln33 - Leu185) fused with a human IgG1 Fc tag at the C-terminus was expressed in CHO.
Species	Human
Source	CHO
ProteinLength	Gln33 - Leu185
Description	Frizzled-7 is a member of the Frizzled family of unconventional G-protein-coupled glycoprotein receptors for the Wnt signaling pathway. The Wnt genes encode a large family of glycoproteins that are essential in development and tissue maintenance. Like other Frizzled family members, Frizzled-7 contains a divergent N-terminal signal peptide (amino acid (aa) 1 - 32), a highly conserved extracellular cysteine-rich domain (CRD, aa 44 - 169), a variable-length linker region (aa 170 - 256), a seven-pass transmembrane region (aa 257 - 549), and a variable-length C-terminal cytoplasmic domain (aa 550 - 574). The CRD, which comprises the binding site for Wnts and other ligands such as Syndecan 4 and fibronectin, spans about 130 amino acid residues and contains ten invariant cysteine residues. Expressed alone, it can compete with native Frizzled to inhibit Wnt canonical signaling. Within aa 33 - 185, human Frizzled-7 shares ~99% aa identity with human, rat, canine and bovine Frizzled-7. Mature Frizzled-7 also shares 80% aa identity with Frizzled-1 and Frizzled-2. Roles for Frizzled-7 have been determined in both canonical Wnt/ beta -Catenin-mediated signaling and non-canonical planar cell

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polarity and calcium pathways. During development, Frizzled-7 is expressed during gastrulation and in the fetal gut, kidney and lung where it is thought to influence tissue morphogenesis via non-canonical signaling pathways. In the adult, Frizzled-7 is expressed in skeletal muscle, especially in satellite cells that mediate muscle regeneration in response to Wnt-7a. It is expressed in embryonic stem cells (ES), contributing to self-renewal signaling (7). It has been implicated in mesenchymal-to-epithelial transition in colorectal cancer. Frizzled-7 mRNA has also been detected in adult heart and placenta.

Predicted N Terminal	Gln33
Form	Lyophilized from a 0.2 µm filtered solution in PBS.
Bio-activity	Measured by its binding ability in a functional ELISA. In a 100 µ reaction mixture containing biotinylated rmWnt-5a at 100 ng/mL and rhFrizzled-7/Fc Chimera dilutions at 0.1-8,000 ng/mL, the concentration of rhFrizzled-7/Fc Chimera that produces 50% of the optimal binding response is found to be approximately 20-80 ng/mL. Optimal concentrations should be determined by each laboratory for each application.
Molecular Mass	Predicted Molecular Mass: 43.3 kDa (monomer); SDS-PAGE: 55-66 kDa, reducing conditions.
Endotoxin	<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
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.

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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.

GENE INFORMATION

Gene Name FZD7 frizzled family receptor 7 [Homo sapiens]

Official Symbol FZD7

Synonyms FZD7; frizzled family receptor 7; frizzled (Drosophila) homolog 7 , frizzled 7, seven transmembrane spanning receptor , frizzled homolog 7 (Drosophila); frizzled-7; FzE3; fz-7; hFz7; frizzled homolog 7; Frizzled, drosophila, homolog of, 7; frizzled 7, seven transmembrane spanning receptor;

Gene ID 8324

mRNA Refseq NM_003507

Protein Refseq NP_003498

MIM 603410

UniProt ID O75084

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