

Human Frizzled-5 / FZD5 Protein (His Tag)



Sino Biological
Biological Solution Specialist

Catalog Number: 10473-H08H

General Information

Gene Name Synonym:

C2orf31; HFZ5

Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Pro 167) of human frizzled 5 (NP_003459.2) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: ≥ 97 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.

Bio Activity:

1. Immobilized Recombinant Human Frizzled-5 / FZD5 Protein (His Tag) (Cat: 10473-H08H) at 2µg/mL (100µL/well) can bind pan-FZD antibody, Human IgG2, the EC₅₀ is 12-36 ng/mL.
2. Vantictumab captured on Protein A chip can bind Recombinant Human Frizzled-5 Protein, His Tag (Cat. No. 10473-H08H) with an affinity constant of 161.1 nM as determined in an SPR assay (Biacore T200) (Routinely tested).

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ala 27

Molecular Mass:

The recombinant human frizzled5 consists of 152 amino acids and has a predicted molecular mass of 17.6 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhfrizzled5 is approximately 25-30 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

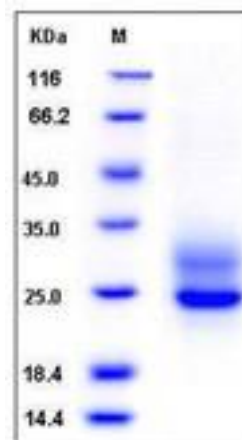
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Wnt signaling is involved in a variety of embryonic development processes of nonvertebrates and vertebrates, where it determines cell motility, cell polarity, differentiation, proliferation and apoptosis, as well as formation of neural synapses. Various homologs of the Wingless protein, termed WNT factors, represent key mediators and act through a receptor complex comprised of members of the Frizzled and low density lipoprotein-related receptors (LRP). 19 WNTs, 10 Frizzled, and 2 LRP proteins have been identified. Frizzled is a family of G protein-coupled receptor proteins consisting of a divergent signal peptide, a highly conserved extracellular cysteine-rich domain (CRD), a variable-length linker region, a seven-pass transmembrane domain, and a variable-length C-terminal tail. Frizzled 5 (FZD5) is believed to be the receptor for the Wnt5A ligand, and also interactions with Wnt10B, Wnt2B, and Wnt 7A functionally. Recent studies of WNT5A/Frizzled-5 signaling have revealed an unexpected and novel role in orchestrating adaptive immunity in response to microbial stimulation. In addition, FZD5 is also implicated in the survival of mature neurons in the parafascicular nucleus of the thalamus.

References

1. Wang Y., *et al.*, (1996), A large family of putative transmembrane receptors homologous to the product of the *Drosophila* tissue polarity gene frizzled. *J. Biol. Chem.* 271:4468-4476.
2. Saitoh T., *et al.*, (2001), Molecular cloning and characterization of human Frizzled-5 gene on chromosome 2q33.3-q34 region. *Int. J. Oncol.* 19:105-110.
3. Ota T., *et al.*, (2004), Complete sequencing and characterization of 21,243 full-length human cDNAs. *Nat. Genet.* 36:40-45.

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