

Frizzled-7/FZD7 Protein, Human (HEK293, His)

Cat. No.:	HY-P78730
Synonyms:	FZD7; Frizzled-7; FzE3; Fz-7; hFz7
Species:	Human
Source:	HEK293
Accession:	O75084 (Q33-L185)
Gene ID:	8324
Molecular Weight:	Approximately 23-33 kDa due to the glycosylation.

PROPERTIES

AA Sequence	<p>Q P Y H G E K G I S V P D H G F C Q P I S I P L C T D I A Y N Q T I L P N L L G</p> <p>H T N Q E D A G L E V H Q F Y P L V K V Q C S P E L R F F L C S M Y A P V C T V</p> <p>L D Q A I P P C R S L C E R A R Q G C E A L M N K F G F Q W P E R L R C E N F P</p> <p>V H G A G E I C V G Q N T S D G S G G P G G G P T A Y P T A P Y L</p>
Biological Activity	Measured by its binding ability in a functional ELISA. In a 100 µL reaction mixture containing biotinylated Wnt-5a at 100 ng/mL and Frizzled-7 dilutions at 0.98-2000 ng/mL. The ED ₅₀ for this effect is 73.1 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized a 0.22 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Frizzled-7 (FZD7), serving as a receptor for Wnt proteins, predominantly operates through the beta-catenin canonical signaling pathway, initiating a cascade that involves disheveled proteins, GSK-3 kinase inhibition, nuclear accumulation of beta-catenin, and the activation of Wnt target genes. While a second signaling pathway involving PKC and calcium fluxes has been observed in some family members, its distinctiveness and potential integration with the canonical pathway remain unclear, with PKC seemingly required for Wnt-mediated GSK-3 kinase inactivation. Activation by WNT8 induces the
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expression of beta-catenin target genes. Upon ligand activation, FZD7 interacts with CCDC88C/DAPLE, displacing DVL1 and inhibiting canonical Wnt signaling, leading to G-protein activation by CCDC88C and the initiation of non-canonical Wnt responses. This intricate involvement suggests FZD7's potential role in transducing polarity information during tissue morphogenesis and/or in differentiated tissues. Additionally, in the context of microbial infection, FZD7 acts as a receptor for *C. difficile* toxin TcdB in the colonic epithelium.

Caution: Product has not been fully validated for medical applications. For research use only.

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