

Frizzled-4/CD344 Protein, Human (HEK293, His)

Cat. No.:	HY-P74140
Synonyms:	CD344 antigen; CD344; EVR1; FEVR; Frizzled-4; Fz-4; FZD4
Species:	Human
Source:	HEK293
Accession:	Q9ULV1 (F37-E180)
Gene ID:	8322
Molecular Weight:	Approximately 22-25 kDa due to glycosylation

PROPERTIES

AA Sequence	<pre> F G D E E E R R C D P I R I S M C Q N L G Y N V T K M P N L V G H E L Q T D A E L Q L T T F T P L I Q Y G C S S Q L Q F F L C S V Y V P M C T E K I N I P I G P C G G M C L S V K R R C E P V L K E F G F A W P E S L N C S K F P P Q N D H N H M C M E G P G D E E V P L P H K T P I Q P G E E </pre>
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Human Frizzled-4, at 0.1 µg/mL (100 µL/well) can bind Wnt-5a. The ED ₅₀ for this effect is 26.59 ng/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 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-4/CD344 Protein serves as a receptor for Wnt proteins, particularly associated with the canonical beta-catenin signaling pathway, involving the activation of disheveled proteins, inhibition of GSK-3 kinase, nuclear accumulation of beta-catenin, and subsequent activation of Wnt target genes. In the context of retinal vascularization, Frizzled-4 plays a pivotal role by acting as a receptor for both Wnt proteins and norrin (NDP), facilitating beta-catenin accumulation and stimulation of LEF/TCF-mediated transcriptional programs. Although a secondary signaling pathway, featuring PKC and calcium fluxes,
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has been observed in some family members, its integration with the canonical pathway, particularly in the context of Wnt-mediated inactivation of GSK-3 kinase, remains uncertain. Frizzled-4's involvement in tissue morphogenesis and intercellular transmission of polarity information is suggested, with interactions observed with MAGI3, NDP, TSKU, and glypican GPC3, highlighting its intricate role in cellular processes and signaling cascades.

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

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