

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Frizzled-8 in direct ELISAs.
Source	Monoclonal Mouse IgG _{2A} Clone # 1022733
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Frizzled-8 Ala25-Pro172 Accession # Q9H461
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Immunocytochemistry Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Frizzled-8 is one of at least ten seven-transmembrane (7TM) glycoproteins of the Frizzled family of Wnt receptors (1-2). Frizzled proteins are thought to be G-protein-coupled (1). Wnt engagement, 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). Human Frizzled-8 cDNA encodes 694 amino acids (aa) including a 27 aa signal peptide, a 247 aa extracellular domain (ECD), the 7TM region (aa 276-605), and a C-terminal cytoplasmic domain with a PDZ binding motif (aa 606-694) (2). The ECD includes a cysteine-rich region (CRD, aa 30-151) that binds Wnts and is highly conserved among Frizzleds, and a linker region. Within aa 28-172, human Frizzled-8 shares 99%, 99%, 90% and 85% aa identity with mouse, rat, *Xenopus* and zebrafish Frizzled-8, respectively. It also shares 82% aa identity with human Frizzled-5. Frizzleds can form homodimers or selective hetero-oligomers with other family members, which can involve the TM regions and possibly the CRD (1, 3). During mouse development, Frizzled-8 is expressed in tissues that are important for organizing the anterior-posterior axis (4). Interactions of Frizzled-8 with several non-Wnt ligands have been identified. Interaction with Frizzled-8 and LRP-6 allows R-spondins to activate β-catenin signaling pathways, while interaction with IGFBP-4 (insulin-like growth factor binding protein (4) or CTGF (connective tissue growth factor) inhibits Wnt signaling (5-7). These ligands bind the extracellular CRD of Frizzled-8, blocking Wnt binding. The recombinant Frizzled-8 CRD has also been used to block Wnt signaling and inhibit growth of teratocarcinomas (5-10).

PRODUCT SPECIFIC NOTICES

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