

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human Frizzled-8 in direct ELISAs.                                                                                                                                                                                                                                  |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2A</sub> Clone # 1022733                                                                                                                                                                                                                          |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | Chinese hamster ovary cell line CHO-derived recombinant human Frizzled-8 Ala25-Pro172<br>Accession # Q9H461                                                                                                                                                                 |
| <b>Conjugate</b>          | Alexa Fluor 750<br>Excitation Wavelength: 749 nm<br>Emission Wavelength: 775 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | 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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