

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Frizzled-10 in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2678A
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived human Frizzled-10 Ile21-Gly161 Accession # Q6NSL8
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and 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.

Flow Cytometry	Titration recommended for optimal concentration with starting range of 0.1-1 µg/1 million cells. Sample used for this experiment was NS0 cell line transfected with Human Frizzled-10
-----------------------	---

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. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Frizzled-10, also known as CD350, is a 68 kDa seven pass transmembrane glycoprotein in the Frizzled family of Wnt receptors (1, 2). The 205 amino acid N-terminal extracellular region of Frizzled-10 contains a cysteine-rich domain that comprises the Wnt binding domain and mediates receptor oligomerization (3-5). The C-terminal cytoplasmic tail contains a PDZ-interaction motif (3). PDZ motifs mediate intracellular binding to scaffolding proteins. Within the cysteine-rich domain, human Frizzled-10 shares 71% amino acid (aa) sequence identity with Frizzled-9 and 31%-46% with Frizzled-1, -2, -3, -4, -5, -6, -7, and -8. It shares 96%, 94%, 90%, and 82% aa sequence identity with chick, mouse, Xenopus, and zebrafish Frizzled-10, respectively. Frizzled-10 is expressed during embryogenesis in the primitive streak, dorsal neural tube, developing brain, limb bud, and airway epithelium (6-11). It is induced by Shh and colocalizes with Shh and Wnt-7a in the neural tube (12, 13). In the adult, Frizzled-10 is expressed in placenta, gastric glands, and colon and renal tubule epithelial cells (4). Frizzled-10 associates with LRP5 to transduce Wnt-7a and Wnt-7b signals, resulting in the stabilization of cytoplasmic beta-catenin (11, 13). Frizzled-10 is also up-regulated in some cancers and transformed cell lines (4, 14). It binds hypoxia inducible gene 2, which promotes oncogenic Wnt signaling and functions as an autocrine growth factor for renal cell carcinomas (15).

References:

1. Kikuchi, A. *et al.* (2007) *Cell. Signal.* **19**:659.
2. Wang, H. *et al.* (2006) *Cell. Signal.* **18**:934.
3. Koike, J. *et al.* (1999) *Biochem. Biophys. Res. Commun.* **262**:39.
4. Nagayama, S. *et al.* (2005) *Oncogene* **24**:6201.
5. Dann, C.E. *et al.* (2001) *Nature* **412**:86.
6. Kemp, C.R. *et al.* (2007) *Dev. Dyn.* **236**:2011.
7. Kawakami, Y. *et al.* (2000) *Mech. Dev.* **91**:375.
8. Nasevicius, A. *et al.* (2000) *Mech. Dev.* **92**:311.
9. Moriwaki, J. *et al.* (2000) *Biochem. Biophys. Res. Commun.* **278**:377.
10. Stark, M.R. *et al.* (2000) *Mech. Dev.* **93**:195.
11. Wang, Z. *et al.* (2005) *Mol. Cell. Biol.* **25**:5022.
12. Nunnally, A.P. and B.A. Parr (2004) *Dev. Genes Evol.* **214**:144.
13. Kawakami, Y. *et al.* (2000) *Dev. Growth Differ.* **42**:561.
14. Saitoh, T. *et al.* (2002) *Int. J. Oncol.* **20**:117.
15. Togashi, A. *et al.* (2005) *Cancer Res.* **65**:4817.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.