Mouse Frizzled-2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1307

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Frizzled-2 in direct ELISAs and Western blots. In direct ELISAs, approximately 30% cross-reactivity with recombinant mouse (rm) Frizzled-1 is observed and less than 5% cross-reactivity with rmFrizzled-4, recombinant human Frizzled-5, rmFrizzled-6, and rmFrizzled-8 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Frizzled-2 Gln29-Leu168 Accession # Q9JIP6
Endotoxin Level	<0.50 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

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.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse Frizzled-2 Fc Chimera (Catalog # 1307-FZ)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Wnt signaling is involved in variety of developmental processes including cell fate determination, cell polarity, tissue patterning and control of cell proliferation. Members of the Frizzled family of proteins serve as receptors for the Wnt signaling pathway. The founding member of this family was identified in Drosophila based on its role in tissue polarity in the adult cuticle and named for the disorganized appearance of bristle hairs on the mutant. Ten mammalian Frizzled genes have been identified to date. The predicted structure of Frizzled proteins is similar among all family members, containing a divergent N-terminal signal peptide, a highly conserved extracellular cysteine-rich domain, a variable-length linker region, a seven-pass transmembrane domain, and a variable-length C-terminal tail. One of the most conserved regions of the Frizzled proteins is the extracellular cysteine-rich domain (CRD) which spans approximately 120 AA and contains 10 invariant cysteines (1). Mouse Frizzled-2 shows 100% amino acid identity to human and rat Frizzled-2 in the CRD region. Frizzled-2 expression is greater in embryonic than adult tissues, with heart, brain, lung, kidney and gut showing the highest levels (2). In addition, Frizzled-2 is expressed during migration and proliferation of neural crest cells that populate the heart and great arteries (3). However, Frizzled-2 may not be strictly involved in developmental processes, as its expression is also upregulated in myofibroblasts during tissue repair after myocardial infarction (4). Frizzled-2 is implicated in the Wnt/Ca2+ pathway, a mechanism by which Wnt-5a signaling results in calcium release from intracellular stores and activation of PKC and calmodulin-dependent protein kinase (5). Secreted frizzled related proteins (sFRPs), antagonists of the Wnt pathway, have been shown to interact with both Wnt ligands and Frizzled receptors (6).

References:

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4. Toyofuku, T. *et al.* (2000) J. Cell Biol. **150**:225.
5. Kuhl, M. *et al.* (2000) Trends Genet. **16**: 279.
6. Bafico, A. *et al.* (1999) J. Biol. Chem. **274**:16180.