Mouse Frizzled-1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1120

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Frizzled-1 in direct ELISAs and Western blots. In direct ELISAs, less than 10% cross-reactivity with recombinant mouse (rm) Frizzled-2, rmFrizzled-4, rmFrizzled-7, and rmFrizzled-8 is observed, and less than 1% cross-reactivity with rmFrizzled-3 and rmFrizzled-6 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Frizzled-1 Gln72-His248 (Met122Ile) Accession # O70421
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

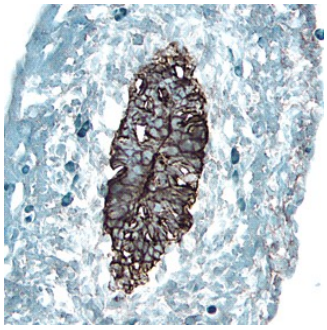
APPLICATIONS

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-1 Fc Chimera (Catalog # 1120-FZ)
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



Frizzled-1 in Embryonic Mouse Intestine. Frizzled-1 was detected in immersion fixed frozen sections of embryonic mouse intestine (13 d.p.c.) using 15 µg/mL Goat Anti-Mouse Frizzled-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1120) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to the plasma membrane of epithelial cells. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

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.

Mouse Frizzled-1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1120

BACKGROUND

The Wnt genes encode a large family of glycoproteins that are essential in development and tissue maintenance (1). Members of the Frizzled family of proteins serve as receptors for the Wnt signaling pathway (2). Ten mouse and human 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 (CRD), a variable-length linker region, a seven-pass transmembrane region, and a variable-length C-terminal cytoplasmic domain. The CRD, which comprises 642 amino acid residues and shares 95% identity with the human orthologue in the CRD. Frizzled-1 mRNA has been detected in relatively large amounts in adult heart, placenta, lung, kidney, pancreas, prostate, and ovary, and in fetal lung and kidney (3).

Several Frizzled-dependent signaling pathways exist (2). Their activation depends on the Wnt ligand and the cell context. Members of the low density lipoprotein receptor-related protein (LRP) are co-receptors for the Wnt ligands. LRP5/6 serve as co-receptors in the Wnt/Frizzled canonical pathway that alters gene expression via the stabilization of β-catenin (4, 5). LRP1 may down regulate Wnt-3a/Frizzled-1 signaling in the canonical pathway by sequestering Frizzled-1 (6). Frizzled-1 is one of the purported Wnt-10b receptors whose signaling inhibits adipogenesis in preadipocytes (7). Frizzled-1 may be part of a feedback mechanism to modulate the effects of BMP-2 in mesenchymal cells since upregulation of its expression by BMP-2 counteracts the effects of BMP-2 and Wnt-3a in inducing the expression of the osteoblast differentiation marker, alkaline phosphatase (8).

References:

1. Wodarz, A. and R. Nusse (1998) Annu. Rev. Cell Dev. Biol. **14**:59.
2. Hsieh, J-C. (2004) Front. Biosci., **9**:1333.
3. Xu, L. *et al.* (2001) Matrix Biol. **2**:147.
4. Tamai, K. *et al.* (2000) Nature **407**:530.
5. Pinson, K. *et al.* (2000) Nature **407**:535.
6. Zielberberg, A. *et al.* (2004) J. Biol. Chem. **279**:17535.
7. Bennet, C. *et al.* (2002) J. Biol. Chem. **277**:30998.
8. Roman-Roman, S. *et al.* (2004) J. Biol. Chem. **279**:5725.