

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived		
	Mouse Frizzled-10 (Ile22-Phe166) Accession # Q8BKG4	IEGRMDP	Mouse IgG _{2a} (Glu98-Lys330)
	N-terminus		C-terminus

N-terminal Sequence Analysis	Ile22
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	44 kDa

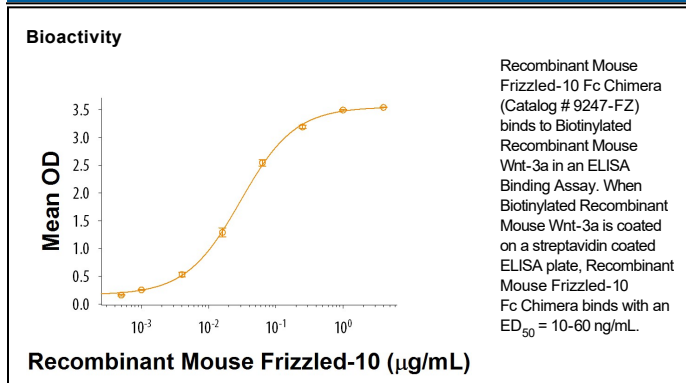
SPECIFICATIONS

SDS-PAGE	53-61 kDa, reducing conditions
Activity	Measured by its ability to bind biotinylated recombinant mouse Wnt-3a in a functional ELISA with an ED ₅₀ of 10-60 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA



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 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). Within the cysteine-rich domain, human Frizzled-10 shares 94% and 99% aa sequence identity with human and rat Frizzled-10, respectively. Frizzled-10 is expressed during embryogenesis in the primitive streak, dorsal neural tube, developing brain, limb bud, and airway epithelium (6-12). It is induced by Shh and colocalizes with Shh and Wnt-7a in the neural tube (13, 14). In the adult, Frizzled-10 is expressed in placenta, gastric glands, and colon and renal tubule epithelial cells (4). Frizzled-10 associates with LRP5 and transduces Wnt-1, -7a, -7b, and -8 signals, resulting in the stabilization of cytoplasmic beta-Catenin (11, 12, 14). It is important for the differentiation of sensory neurons (12). Frizzled-10 is also up-regulated in some cancers and transformed cell lines (4, 15). It binds hypoxia inducible gene 2, which promotes oncogenic Wnt signaling and functions as an autocrine growth factor for renal cell carcinomas (16).

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. Garcia-Morales, C. *et al.* (2009) *Dev. Biol.* **335**:143.
13. Nunnally, A.P. and B.A. Parr (2004) *Dev. Genes Evol.* **214**:144.
14. Kawakami, Y. *et al.* (2000) *Dev. Growth Differ.* **42**:561.
15. Saitoh, T. *et al.* (2002) *Int. J. Oncol.* **20**:117.
16. Togashi, A. *et al.* (2005) *Cancer Res.* **65**:4817.