SANTA CRUZ BIOTECHNOLOGY, INC.

OLFM1 (N-22): sc-130179

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The olfactomedin family comprises a diverse group of secreted glycoproteins, which includes OLFM1 (Noelin-1), OLFM2 (Noelin-2), OLFM3 (Noelin-3), OLFM4 (Noelin-4), tiarin, pancortin, Gliomedin and mycocilin. These proteins are implicated in the development of the nervous system. Specifically, OLFM1 and OLFM2 expression is observed in the neural plate and neural crest, as well as in the cranial ganglia in mouse at E8-10, and later in brain tissue and in the zone of polarizing activity in the limb. Overexpression of OLFM1 causes an excess of neural crest emigrations and prolonged neural crest production. OLFM2 participates in the regulation of the development of the anterior nervous system. An Arg 144-Gln mutation in OLFM2 has been implicated as a possible cause for open-angle glaucoma (OAG).

REFERENCES

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2. Bronner-Fraser, M. 2002. Molecular analysis of neural crest formation. J. Physiol. 96: 3-8.
3. Moreno, T.A. and Bronner-Fraser, M. 2002. Neural expression of mouse Noelin-1/2 and comparison with other vertebrates. Mech. Dev. 119: 121-125.
4. Mukhopadhyay, A., et al. 2004. Bioinformatic approaches for identification and characterization of olfactomedin related genes with a potential role in pathogenesis of ocular disorders. Mol. Vis. 10: 304-314.
5. Moreno, T.A. and Bronner-Fraser, M. 2005. Noelins modulate the timing of neuronal differentiation during development. Dev. Biol. 288: 434-447.
6. Funayama, T., et al. 2006. SNPs and interaction analyses of Noelin-2, myocilin, and Optineurin genes in Japanese patients with open-angle glaucoma. Invest. Ophthalmol. Vis. Sci. 47: 5368-5375.
7. Sakuragi, M., et al. 2006. Functional analysis of chick ONT1 reveals distinguishable activities among olfactomedin-related signaling factors. Mech. Dev. 123: 114-123.
8. Lee, J.A., et al. 2008. Olfactomedin-2 mediates development of the anterior central nervous system and head structures in zebrafish. Mech. Dev. 125: 167-181.

CHROMOSOMAL LOCATION

Genetic locus: OLFM1 (human) mapping to 9q34.3.

SOURCE

OLFM1 (N-22) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of OLFM1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

OLFM1 (N-22) is recommended for detection of OLFM1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for OLFM1 siRNA (h): sc-92680, OLFM1 shRNA Plasmid (h): sc-92680-SH and OLFM1 shRNA (h) Lentiviral Particles: sc-92680-V.

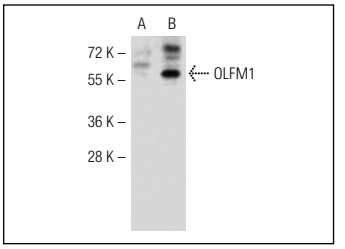
Molecular Weight of OLFM1: 55 kDa.

Positive Controls: OLFM1 transfected 293 whole cell lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



OLFM1 (N-22): sc-130179. Western blot analysis of OLFM1 expression showing non-transfected (**A**) and transfected (**B**) 293 whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.