

DESCRIPTION

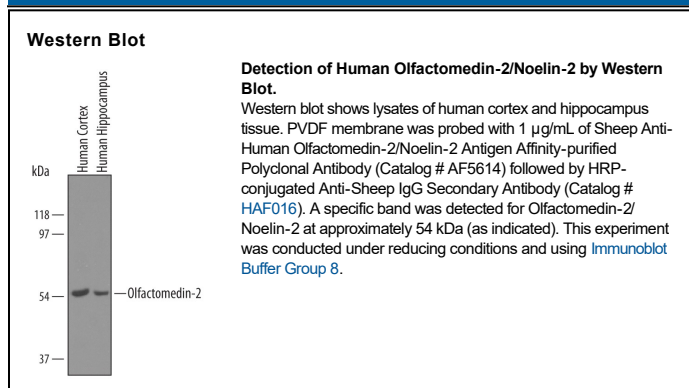
Species Reactivity	Human
Specificity	Detects human Olfactomedin-2/Noelin-2 in direct ELISAs and Western blots. In direct ELISAs, approximately 10% cross-reactivity with recombinant mouse (rm) Olfactomedin-1 is observed and less than 5% cross-reactivity with recombinant human Olfactomedin-4 and rmOlfactomedin-L3 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Olfactomedin-2/Noelin-2 Gln21-Pro454 Accession # O95897
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

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	1 µg/mL	See Below

DATA



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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
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. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Olfactomedin-2 (OLFM2, OM2), also called OlfC or neuronal olfactomedin-related endoplasmic reticulum-localized-2 (Noelin-2) is a 50 kDa (predicted), secreted member of the olfactomedin/noelin family of proteins (1-3). Since Noelin-2 has also been used to designate an alternately spliced form of Noelin-1, Olfactomedin-2 is the less ambiguous name (4). Olfactomedin domain-containing proteins are often found in neural tissues (3). Human Olfactomedin-2 expressed sequence tags have mainly been found in the brain and eye, and RNA in the cerebellum (1, 2). In zebrafish, Olfactomedin-2 expression is developmentally regulated and, like Noelin-1, may play a role in neural crest cell differentiation (5). The human Olfactomedin-2 cDNA encodes a 20 amino acid (aa) signal sequence and a 454 mature protein that contains two coiled-coil regions (aa 58-85 and 136-193) and an Olfactomedin domain (aa 194-446). Mature human Olfactomedin-2 shares 98% aa identity with rat, bovine and equine, 97% with mouse and canine, 81% with *Xenopus*, and 77% with zebrafish Olfactomedin-2. No alternate splice variants have been reported for Olfactomedin-2 (1). Polymorphisms of human Olfactomedin-2, with or without additional polymorphisms in optineurin (OPTN), have been associated with a small fraction of high intraocular pressure or open-angle glaucoma cases in Japanese patients (6). The family member myocilin shows stronger association with these ocular disorders, and either myocilin or Noelin-1 might heterodimerize with Olfactomedin-2 (1). Evidence suggests that Olfactomedin-2 has evolved from Noelin-1 gene duplication, and myocilin from Olfactomedin-2 gene duplication (1).

References:

1. Mukhopadhyay, A. *et al.* (2004) *Mol. Vis.* **10**:304.
2. Kulkarni, N.H. *et al.* (2000) *Genet. Res. Camb.* **76**:41.
3. Tomarev, S.I. and N. Nakaya (2009) *Mol. Neurobiol.* **40**:122.
4. Moreno, T.A. & M. Bronner-Fraser (2002) *Mech. Dev.* **119**:121.
5. Lee, J-A. *et al.* (2008) *Mech. Dev.* **125**:167.
6. Funayama, T. *et al.* (2006) *Invest. Ophthalmol. Vis. Sci.* **47**:5368.