

# OBCAM (K-14): sc-26121

## BACKGROUND

Opioid-binding cell adhesion molecule (OBCAM) is a glycosylphosphatidylinositol (GPI)-anchored neural cell adhesion molecule that binds opioids in the presence of acidic lipids. OBCAM consists of three immunoglobulin-like C2-type domains characteristic of members of the immunoglobulin superfamily and the IgLON subfamily, of which limbic system-associated membrane protein (LAMP) and neurotrimin (Ntm) are also members. Homophilic and heterophilic interactions between IgLON family members may play a role in the direction of neuronal projections by both promoting and inhibiting growth. During early rat brain development, OBCAM is highly expressed in post-mitotic neurons and in fiber tracts containing expanded axons. In adult rat brain, OBCAM is expressed primarily in the gray matter. OBCAM is also expressed in the hypothalamic magnocellular neurons, specifically in dendrites. OBCAM expression patterns suggest that it assists in axonal outgrowth processes and gives magnocellular neurons the ability to rearrange dendritic connectivity.

## REFERENCES

1. Struyk, A.F., Canoll, P.D., Wolfgang, M.J., Rosen, C.L., D'Eustachio, P. and Salzer, J.L. 1995. Cloning of neurotrimin defines a new subfamily of differentially expressed neural cell adhesion molecules. *J. Neurosci.* 15: 2141-2156.
2. Hachisuka, A., Nakajima, O., Yamazaki, T. and Sawada, J. 1999. Localization of opioid-binding cell adhesion molecule (OBCAM) in adult rat brain. *Brain Res.* 842: 482-486.
3. Miyata, S., Funatsu, N., Matsunaga, W., Kiyohara, T., Sokawa, Y. and Maekawa, S. 2000. Expression of the IgLON cell adhesion molecules Kilon and OBCAM in hypothalamic magnocellular neurons. *J. Comp. Neurol.* 424: 74-85.
4. Hachisuka, A., Nakajima, O., Yamazaki, T. and Sawada, J. 2000. Developmental expression of opioid-binding cell adhesion molecule (OBCAM) in rat brain. *Brain Res.* 122: 183-191.
5. Gil, O.D., Zhang, L., Chen, S., Ren, Y.Q., Pimenta, A., Zanazzi, G., Hillman, D., Levitt, P. and Salzer, J.L. 2002. Complementary expression and heterophilic interactions between IgLON family member neurotrimin and LAMP. *J. Neurobiol.* 51: 190-204.
6. Miyata, S., Matsumoto, N., Taguchi, K., Akagi, A., Iino, T., Funatsu, N. and Maekawa, S. 2003. Biochemical and ultrastructural analyses of IgLON cell adhesion molecules, Kilon and OBCAM in the rat brain. *Neuroscience* 117: 645-658.
7. SWISS-PROT/ TrEMBL (Q14982). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

## CHROMOSOMAL LOCATION

Genetic locus: *Opcml* (mouse) mapping to 9 A4.

## STORAGE

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

## SOURCE

OBCAM (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of OBCAM of rat origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-26121 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

OBCAM (K-14) is recommended for detection of OBCAM of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

OBCAM (K-14) is also recommended for detection of OBCAM in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for OBCAM siRNA (m): sc-72057, OBCAM shRNA Plasmid (m): sc-72057-SH and OBCAM shRNA (m) Lentiviral Particles: sc-72057-V.

Molecular Weight of OBCAM: 51-58 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Farina, F., Botto, L., Chinello, C., Cunati, D., Magni, F., Masserini, M. and Palestini, P. 2009. Characterization of prion protein-enriched domains, isolated from rat cerebellar granule cells in culture. *J. Neurochem.* 110: 1038-1048.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.