SANTA CRUZ BIOTECHNOLOGY, INC.

OBCAM siRNA (h): sc-72056

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., et al. 1995. Cloning of Neurotrimin defines a new subfamily of differentially expressed neural cell adhesion molecules. J. Neurosci. 15: 2141-2156.
2. Hachisuka, A., et al. 1999. Localization of opioid-binding cell adhesion molecule (OBCAM) in adult rat brain. Brain Res. 842: 482-486.
3. Miyata, S., et al. 2000. Expression of the IgLON cell adhesion molecules Kilon and OBCAM in hypothalamic magnocellular neurons. J. Comp. Neurol. 424: 74-85.
4. Hachisuka, A., et al. 2000. Developmental expression of opioid-binding cell adhesion molecule (OBCAM) in rat brain. Brain Res. Dev. Brain Res. 122: 183-191.
5. Gil, O.D., et al. 2002. Complementary expression and heterophilic interactions between IgLON family memer neurotrimin and LAMP. J. Neurobiol. 51: 190-204.

CHROMOSOMAL LOCATION

Genetic locus: OPCML (human) mapping to 11q25.

PRODUCT

OBCAM siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see OBCAM shRNA Plasmid (h): sc-72056-SH and OBCAM shRNA (h) Lentiviral Particles: sc-72056-V as alternate gene silencing products.

For independent verification of OBCAM (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-72056A, sc-72056B and sc-72056C.

PROTOCOLS

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

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

OBCAM siRNA (h) is recommended for the inhibition of OBCAM expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor OBCAM gene expression knockdown using RT-PCR Primer: OBCAM (h)-PR: sc-72056-PR (20 µl, 581 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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