

# MOR-1 (C-20): sc-7488

## BACKGROUND

Endogenous opioid peptides and opiates, like morphine, transmit their pharmacological effects through membrane bound opioid receptors. Pharmacological studies and molecular cloning have led to the identification of three different types of opioid receptor,  $\mu$ -type,  $\delta$ -type and  $\kappa$ -type, also designated MOR-1, DOR-1 and KOR-1, respectively. MOR-1 is a receptor for  $\beta$ -endorphin, DOR-1 is a receptor for enkephalins and KOR-1 is a receptor for dynorphins. The three opioid receptor types are highly homologous and belong to the superfamily of G protein-coupled receptors. Opioid receptors have been shown to modulate a range of brain functions, including instinctive behavior and emotions. This regulation is thought to involve the inhibition of neurotransmitter release by reducing calcium ion currents and increasing potassium ion conductance.

## CHROMOSOMAL LOCATION

Genetic locus: OPRM1 (human) mapping to 6q25.2; Oprm1 (mouse) mapping to 10 A1.

## SOURCE

MOR-1 (C-20) is available as either goat (sc-7488) or rabbit (sc-7488-R) affinity purified polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of MOR-1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7488 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

MOR-1 (C-20) is recommended for detection of MOR-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

MOR-1 (C-20) is also recommended for detection of MOR-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MOR-1 siRNA (h): sc-35957, MOR-1 siRNA (m): sc-35958, MOR-1 shRNA Plasmid (h): sc-35957-SH, MOR-1 shRNA Plasmid (m): sc-35958-SH, MOR-1 shRNA (h) Lentiviral Particles: sc-35957-V and MOR-1 shRNA (m) Lentiviral Particles: sc-35958-V.

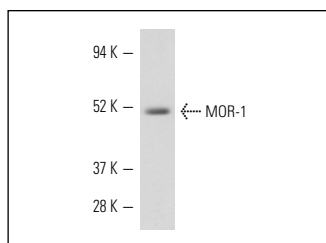
Molecular Weight of MOR-1: 50 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, mouse brain extract: sc-2253 or EOC 20 whole cell lysate: sc-364187.

## RESEARCH USE

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

## DATA



MOR-1 (C-20)-R: sc-7488-R. Western blot analysis of MOR-1 expression in mouse brain tissue extract.

## SELECT PRODUCT CITATIONS

- Song, B., et al. 2003. Peptidases prevent  $\mu$ -opioid receptor internalization in dorsal horn neurons by endogenously released opioids. *J. Neurosci.* 23: 1847-1858.
- Iglesias, M., et al. 2003.  $\mu$ -opioid receptor activation prevents apoptosis following serum withdrawal in differentiated SH-SY5Y cells and cortical neurons via phosphatidylinositol 3-kinase. *Neuropharmacology* 44: 482-492.
- Cheng, B., et al. 2008. Coexistence and upregulation of three types of opioid receptors,  $\mu$ ,  $\delta$  and  $\kappa$ , in human hypertrophic scars. *Br. J. Dermatol.* 158: 713-720.
- Manzke, T., et al. 2009. Serotonin targets inhibitory synapses to induce modulation of network functions. *Philos. Trans. R. Soc. Lond., B, Biol. Sci.* 364: 2589-2602.
- Glattard, E., et al. 2010. Endogenous morphine levels are increased in sepsis: a partial implication of neutrophils. *PLoS ONE* 5: e8791.
- Dimatelis, J.J., et al. 2012. Behavioral changes after maternal separation are reversed by chronic constant light treatment. *Brain Res.* 1480: 61-71.
- Yan, H. and Yu, L.C. 2013. Influences of calcitonin gene-related peptide on  $\mu$  opioid receptors in nucleus accumbens neurons of rats. *Neuropeptides* 47: 125-131.
- Ni, J., et al. 2013. Regulation of  $\mu$ -opioid type 1 receptors by microRNA134 in dorsal root ganglion neurons following peripheral inflammation. *Eur. J. Pain* 17: 313-323.

## PROTOCOLS

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