

MOR-1 (Q-18): sc-27072

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, μ -type, δ -type and κ -type, also designated MOR-1, DOR-1 and KOR-1, respectively. MOR-1 is a receptor for β -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.

REFERENCES

1. Chang, K.J. and Cuatrecasas, P. 1979 Multiple opiate receptors. Enkephalins and morphine bind to receptors of different specificity. *J. Biol. Chem.* 254: 2610-2618.
2. Cherubini, E. and North, R.A. 1985. μ and κ opioids inhibit transmitter release by different mechanisms. *Proc. Natl. Acad. Sci. USA* 82: 1860-1863.
3. Schoffelmeier, A.N., et al. 1988. μ -, δ - and κ -opioid receptor-mediated inhibition of neurotransmitter release and adenylate cyclase activity in rat brain slices: studies with fentanyl isothiocyanate. *Eur. J. Pharmacol.* 154: 169-178.
4. Knapp, R.J., et al. 1995. Molecular biology and pharmacology of cloned opioid receptors. *FASEB J.* 9: 516-525.
5. Satoh, M. and Minami, M. 1995. Molecular pharmacology of the opioid receptors. *Pharmacol. Ther.* 68: 343-364.
6. Minami, M. and Satoh, M. 1995. Molecular biology of the opioid receptors: structures, functions and distributions. *Neurosci. Res.* 23: 121-145.

CHROMOSOMAL LOCATION

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

SOURCE

MOR-1 (Q-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of MOR-1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-27072 P, (100 μ 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 (Q-18) 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 μ g per 100-500 μ 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 (Q-18) 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.

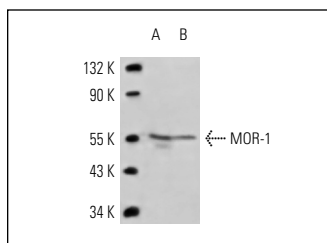
Molecular Weight of MOR-1: 50 kDa.

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

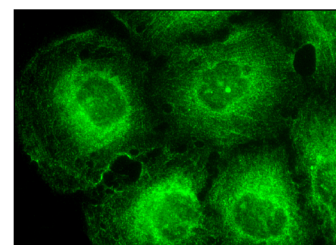
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



MOR-1 (Q-18): sc-27072. Western blot analysis of MOR-1 expression in EOC 20 (A) and EOC 13.31 (B) whole cell lysates.



MOR-1 (Q-18): sc-27072. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

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.