SANTA CRUZ BIOTECHNOLOGY, INC.

MOR-1 (H-80): sc-15310

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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., et al. 1979. Multiple opiate receptors. Enkephalins and morphine bind to receptors of different specificty. J. Biol. Chem. 254: 2610-2618.
2. Cherubini, E., et al. 1985. μ and κ opioids inhibit transmitter release by different mechanisms. Proc. Natl. Acad. Aci. USA 82: 1860-1863.

CHROMOSOMAL LOCATION

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

SOURCE

MOR-1 (H-80) is a rabbit polyclonal antibody raised against amino acids 1-80 mapping near the N-terminus of MOR-1 of human origin.

PRODUCT

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

APPLICATIONS

MOR-1 (H-80) 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 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 (H-80) is also recommended for detection of MOR-1 in additional species, including canine.

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.

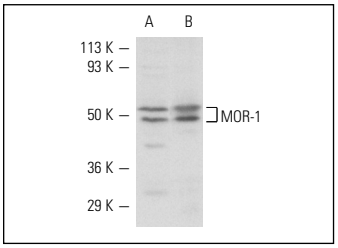
Molecular Weight of MOR-1: 50 kDa.

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

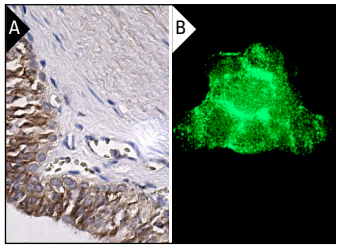
STORAGE

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

DATA



MOR-1 (H-80): sc-15310. Western blot analysis of MOR-1 expression in SK-N-MC whole cell lysate (**A**) and mouse brain extract (**B**).



MOR-1 (H-80): sc-15310. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of cells in seminiferous ducts (**A**). Immunofluorescence staining of methanol-fixed SK-N-MC cells showing membrane staining (**B**).

SELECT PRODUCT CITATIONS

1. Zhang, N., et al. 2004. Proinflammatory chemokines, such as C-C chemokine ligand 3, desensitize μ-opioid receptors on dorsal root ganglia neurons. J. Immunol. 173: 594-599.
2. Kiosterakis, G., et al. 2009. Long-term effects of neonatal handling on μ-opioid receptor levels in the brain of the offspring. Dev. Psychobiol. 51: 439-449.
3. Liu, H., et al. 2010. Mechanisms involved in phosphatidylinositol 3-kinase pathway mediated up-regulation of the μ opioid receptor in lymphocytes. Biochem. Pharmacol. 79: 516-523.
4. Hahn, J.W., et al. 2010. μ and κ opioids modulate mouse embryonic stem cell-derived neural progenitor differentiation via MAP kinases. J. Neurochem. 112: 1431-1441.
5. Zagon, I.S., et al. 2011. B lymphocyte proliferation is suppressed by the opioid growth factor-opioid growth factor receptor axis: Implication for the treatment of autoimmune diseases. Immunobiology 216: 173-183.
6. Zagon, I.S., et al. 2011. T lymphocyte proliferation is suppressed by the opioid growth factor ([Met(5)]-enkephalin)-opioid growth factor receptor axis: implication for the treatment of autoimmune diseases. Immunobiology 216: 579-590.
7. Su, T.F., et al. 2011. Cannabinoid CB2 receptors contribute to upregulation of β-endorphin in inflamed skin tissues by electroacupuncture. Mol. Pain 7: 98.
8. Olianas, M.C., et al. 2012. Potentiation of dopamine D1-like receptor signaling by concomitant activation of δ- and μ-opioid receptors in mouse medial prefrontal cortex. Neurochem. Int. 61: 1404-1416.

RESEARCH USE

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