SANTA CRUZ BIOTECHNOLOGY, INC.

KOR-1 (H-70): sc-9112

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.

CHROMOSOMAL LOCATION

Genetic locus: OPRK1 (human) mapping to 8q11.23; Oprk1 (mouse) mapping to 1 A1.

SOURCE

KOR-1 (H-70) is a rabbit polyclonal antibody raised against amino acids 1-70 of KOR-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

KOR-1 (H-70) is recommended for detection of KOR-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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for KOR-1 siRNA (h): sc-35760, KOR-1 siRNA (m): sc-35761, KOR-1 shRNA Plasmid (h): sc-35760-SH, KOR-1 shRNA Plasmid (m): sc-35761-SH, KOR-1 shRNA (h) Lentiviral Particles: sc-35760-V and KOR-1 shRNA (m) Lentiviral Particles: sc-35761-V.

Molecular Weight of KOR-1: 43 kDa.

Positive Controls: AT-3 whole cell lysate or PC-12 cell lysate: sc-2250.

STORAGE

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

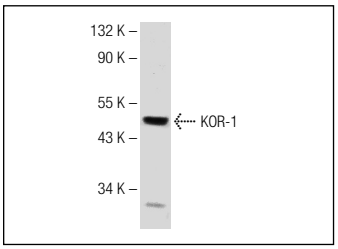
PROTOCOLS

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

RESEARCH USE

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

DATA



KOR-1 (H-70): sc-9112. Western blot analysis of KOR-1 expression in AT-3 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Bi, J., et al. 2006. Axonal mRNA transport and localized translational regulation of κ-opioid receptor in primary neurons of dorsal root ganglia. Proc. Natl. Acad. Sci. USA 103: 19919-19924.
2. Buch, S.K., et al. 2007. Glial-restricted precursors: patterns of expression of opioid receptors and relationship to human immunodeficiency virus-1 Tat and morphine susceptibility *in vitro*. Neuroscience 146: 1546-1554.
3. De Minicis, S., et al. 2008. Role of endogenous opioids in modulating HSC activity *in vitro* and liver fibrosis *in vivo*. Gut 57: 352-364.
4. Jin-Cheng, L., et al. 2008. Anti-arrhythmic effects of κ-opioid receptor and its changes in ischemia and reperfusion. Arch. Med. Res. 39: 483-488.
5. Peng, P., et al. 2009. Distribution of κ-opioid receptor in the pulmonary artery and its changes during hypoxia. Anat. Rec. 292: 1062-1067.
6. 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.
7. 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.
8. Gabrilovac, J., et al. 2012. IFN-γ up-regulates κ opioid receptors (KOR) on murine macrophage cell line J774. J. Neuroimmunol. 245: 56-65.
9. Ju, J., et al. 2013. Role of spinal opioid receptor on the antiallodynic effect of intrathecal nociceptin in neuropathic rat. Neurosci. Lett. 542: 118-122.