

KOR-1 (N-19): sc-7494

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

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- 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.
- Schoffelmeer, 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.
- Knapp, R.J., et al. 1995. Molecular biology and pharmacology of cloned opioid receptors. *FASEB J.* 9: 516-525.
- Satoh, M. and Minami, M. 1995. Molecular pharmacology of the opioid receptors. *Pharmacol. Ther.* 68: 343-364.
- Minami, M. and Satoh, M. 1995. Molecular biology of the opioid receptors: structures, functions and distributions. *Neurosci. Res.* 23: 121-145.
- Simmons, M.L. and Chavkin, C. 1996. κ -opioid receptor activation of a dendrotoxin-sensitive potassium channel mediates presynaptic inhibition of mossy fiber neurotransmitter release. *Mol. Pharmacol.* 50: 80-85.

CHROMOSOMAL LOCATION

Genetic locus: OPRK1 (human) mapping to 8q11.2; Oprk1 (mouse) mapping to 1 A1.

SOURCE

KOR-1 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of KOR-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-7494 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KOR-1 (N-19) 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), 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.

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) 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.

SELECT PRODUCT CITATIONS

- Ott, D., et al. 2004. Construction and characterization of a κ opioid receptor devoid of all free cysteines. *Protein Eng. Des. Sel.* 17: 37-48.
- Sternini, C., et al. 2004. The opioid system in the gastrointestinal tract. *Neurogastroenterol. Motil.* 16: 3-16.

STORAGE

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

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.



Try **KOR-1 (D-8): sc-374479**, our highly recommended monoclonal alternative to KOR-1 (N-19).