SANTA CRUZ BIOTECHNOLOGY, INC.

KOR-3 (A-18): sc-9760

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Endogenous opioid peptides and opiates like morphine mediate their cellular effects through membrane bound receptors. Three different types of opioid receptors have been identified, μ-type, δ-type and κ-type. A fourth opioid receptor, KOR-3 (κ-type opioid receptor, also designated ORL1-opioid receptor Like 1), has been identified. Though closely related genetically to the other opioid receptors, KOR-3 has a distinct pharmacological profile. Nociceptin, the neuropeptide which activates KOR-3, is structurally similar to the κ-opioid peptide dynorphin A, but quite different in its mode of interaction with its receptor. KOR-3 is widely expressed in the nervous system, and is likely to modulate a broad range of physiological and behavioral functions.

REFERENCES

1. Mollereau, C., et al. 1994. ORL1, a novel member of the opioid receptor family. Cloning, functional expression and localization. FEBS Lett. 341: 33-38.
2. Knapp, R.J., et al. 1995. Molecular biology and pharmacology of cloned opioid receptors. FASEB J. 9: 516-525.
3. Meunier, J.C., et al. 1995. Isolation and structure of the endogenous agonist of opioid receptor-like ORL1 receptor. Nature 377: 532-535.
4. Reinscheid, R.K., et al. 1995. Orphanin FQ: a neuropeptide that activates an opioidlike G protein-coupled receptor. Science 270: 792-794.
5. Darland, T., et al. 1998. Orphanin FQ/nociceptin: a role in pain and analgesia, but so much more. Trends Neurosci. 21: 215-221.
6. Connor, M., et al. 1999. Opioid receptor signalling mechanisms. Clin. Exp. Pharmacol. Physiol. 26: 493-499.
7. Mollereau, C., et al. 1999. Distinct mechanisms for activation of the opioid receptor-like 1 and κ-opioid receptors by nociceptin and dynorphin A. Mol. Pharmacol. 55: 324-331.

CHROMOSOMAL LOCATION

Genetic locus: OPRL1 (human) mapping to 20q13.33; Oprl1 (mouse) mapping to 2 H4.

SOURCE

KOR-3 (A-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of KOR-3 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.

Blocking peptide available for competition studies, sc-9760 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

KOR-3 (A-18) is recommended for detection of KOR-3 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).

KOR-3 (A-18) is also recommended for detection of KOR-3 in additional species, including equine.

Suitable for use as control antibody for KOR-3 siRNA (h): sc-42150, KOR-3 siRNA (m): sc-42151, KOR-3 shRNA Plasmid (h): sc-42150-SH, KOR-3 shRNA Plasmid (m): sc-42151-SH, KOR-3 shRNA (h) Lentiviral Particles: sc-42150-V and KOR-3 shRNA (m) Lentiviral Particles: sc-42151-V.

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.

SELECT PRODUCT CITATIONS

1. Hadrup, N., et al. 2004. Opioid receptor-like 1 stimulation in the collecting duct induces aquaresis through vasopressin-independent aquaporin-2 downregulation. Am. J. Physiol. Renal Physiol. 287: F160-F168.
2. Yuce, B., et al. 2007. ORL-1 receptor mediates the action of nociceptin on ascending myenteric reflex pathways in rats. Gastroenterology 133: 574-586.

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.