

KOR-3 (H-85): sc-15309

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 inter-action 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

- Mollereau, C., et al. 1994. ORL1, a novel member of the opioid receptor family. Cloning, functional expression and localization. *FEBS Lett.* 341: 33-38.
- Knapp, R.J., et al. 1995. Molecular biology and pharmacology of cloned opioid receptors. *FASEB J.* 9: 516-525.

CHROMOSOMAL LOCATION

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

SOURCE

KOR-3 (H-85) is a rabbit polyclonal antibody raised against amino acids 161-245 mapping within an internal region of KOR-3 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.

RESEARCH USE

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

APPLICATIONS

KOR-3 (H-85) 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 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).

KOR-3 (H-85) is also recommended for detection of KOR-3 in additional species, including equine, canine, bovine and porcine.

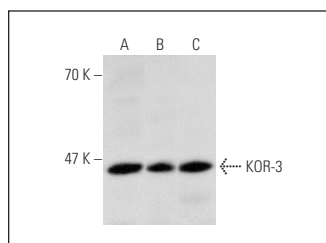
Suitable for use as control antibody for KOR-3 siRNA (h): sc-42150, KOR-3 siRNA (m): sc-42151, KOR-3 shRNA Plasmid (h): sc-42150-SH, KOR-3 shRNA Plasmid (m): sc-42151-SH, KOR-3 shRNA (h) Lentiviral Particles: sc-42150-V and KOR-3 shRNA (m) Lentiviral Particles: sc-42151-V.

Positive Controls: SK-N-MC cell lysate: sc-2237, Raji whole cell lysate: sc-364236 or C6 whole cell lysate: sc-364373.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



KOR-3 (H-85): sc-15309. Western blot analysis of KOR-3 expression in Raji (A), C6 (B) and SK-N-MC (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- 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.
- Krüger, C., et al. 2006. Expression und function of the ORL-1 receptor on human leukocytes. *Schmerz* 20: 509-518.
- Fu, X., et al. 2007. Regulation of proinflammatory cytokines gene expression by nociceptin/orphanin FQ in the spinal cord and the cultured astrocytes. *Neuroscience* 144: 275-285.
- Fu, X., et al. 2007. Changes in expression of nociceptin/orphanin FQ and its receptor in spinal dorsal horn during electroacupuncture treatment for peripheral inflammatory pain in rats. *Peptides* 28: 1220-1228.
- Yuce, B., et al. 2007. ORL-1 receptor mediates the action of nociceptin on ascending myenteric reflex pathways in rats. *Gastroenterology* 133: 574-586.
- Agostini, S., et al. 2009. Peripheral anti-nociceptive effect of nociceptin/orphanin FQ in inflammation and stress-induced colonic hyperalgesia in rats. *Pain* 141: 292-299.
- Fichna, J., et al. 2012. Salvinorin A has antiinflammatory and antinociceptive effects in experimental models of colitis in mice mediated by KOR and CB1 receptors. *Inflamm. Bowel Dis.* 18: 1137-1145.

STORAGE

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