

# DOR-1 (M-20): sc-7492

## 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,  $\mu$ -type,  $\delta$ -type and  $\kappa$ -type, also designated MOR-1, DOR-1 and KOR-1, respectively. MOR-1 is a receptor for  $\beta$ -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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2. Cherubini, E., et al. 1985.  $\mu$ - and  $\kappa$ -opioids inhibit transmitter release by different mechanisms. *Proc. Natl. Acad. Sci. USA* 82: 1860-1863.
3. Schoffelemeier, A.N., et al. 1988.  $\mu$ -,  $\delta$ - and  $\kappa$ -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.
4. Knapp, R.J., et al. 1995. Molecular biology and pharmacology of cloned opioid receptors. *FASEB J.* 9: 516-525.
5. Satoh, M., et al. 1995. Molecular pharmacology of the opioid receptors. *Pharmacol. Ther.* 68: 343-364.
6. Minami, M., et al. 1995. Molecular biology of the opioid receptors: structures, functions and distributions. *Neurosci. Res.* 23: 121-145.
7. Simmons, M.L., et al. 1996.  $\kappa$ -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: OPRD1 (human) mapping to 1p35.3; Oprd1 (mouse) mapping to 4 D2.3.

## SOURCE

DOR-1 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of DOR-1 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7492 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

DOR-1 (M-20) is recommended for detection of DOR-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

Suitable for use as control antibody for DOR-1 siRNA (h): sc-42148, DOR-1 siRNA (m): sc-42149, DOR-1 siRNA (r): sc-156165, DOR-1 shRNA Plasmid (h): sc-42148-SH, DOR-1 shRNA Plasmid (m): sc-42149-SH, DOR-1 shRNA Plasmid (r): sc-156165-SH, DOR-1 shRNA (h) Lentiviral Particles: sc-42148-V, DOR-1 shRNA (m) Lentiviral Particles: sc-42149-V and DOR-1 shRNA (r) Lentiviral Particles: sc-156165-V.

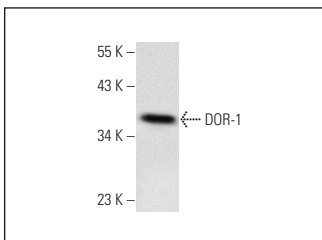
Molecular Weight of DOR-1: 58 kDa.

Positive Controls: HUV-EC-C whole cell lysate: sc-364180.

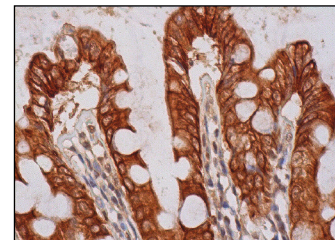
## RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



DOR-1 (M-20): sc-7492. Western blot analysis of DOR-1 expression in HUV-EC-C whole cell lysate.



DOR-1 (M-20): sc-7492. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic and membrane staining of glandular cells.

## 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.