SANTA CRUZ BIOTECHNOLOGY, INC.

DOR-1 (H-60): sc-9111

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Endogenous opioid peptides and opiates, like morphine, transmit their pharmacological effects through membrane bound opioid receptors. Pharma cological 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

1. Chang, K.J., et al. 1979. Multiple opiate receptors. Enkephalins and morphine bind to receptors of different specificty. J. Biol. Chem. 254: 2610-2618.
2. Cherubini, E., et al. 1985. μ and κ opioids inhibit transmitter release by different mechanisms. Proc. Natl. Acad. Aci. USA 82: 1860-1863.

CHROMOSOMAL LOCATION

Genetic locus: OPRD1 (human) mapping to 1p35.3; Oprd1 (mouse) mapping to 4 D2.3.

SOURCE

DOR-1 (H-60) is a rabbit polyclonal antibody raised against amino acids 1-60 of DOR-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

DOR-1 (H-60) 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 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).

DOR-1 (H-60) is also recommended for detection of DOR-1 in additional species, including canine and bovine.

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

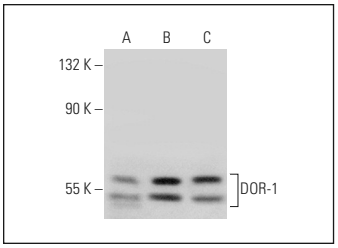
Molecular Weight of DOR-1: 58 kDa.

Positive Controls: HUV-EC-C whole cell lysate: sc-364180, NIH/3T3 whole cell lysate: sc-2210 or U-251-MG whole cell lysate: sc-364176.

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



DOR-1 (H-60): sc-9111. Western blot analysis of DOR-1 expression in HUV-EC-C (**A**), NIH/3T3 (**B**) and U-251-MG (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Bao, L., et al. 2003. Activation of δ opioid receptors induces receptor insertion and neuropeptide secretion. Neuron 37: 121-133.
2. Patwardhan, A.M., et al. 2005. Bradykinin-induced functional competence and trafficking of the δ-opioid receptor in trigeminal nociceptors. J. Neurosci. 25: 8825-8832.
3. Cheng, B., et al. 2008. Coexistence and upregulation of three types of opioid receptors, μ, δ and κ, in human hypertrophic scars. Br. J. Dermatol. 158: 713-720.
4. 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.
5. Xie, W.Y., et al. 2009. Disruption of Cdk5-associated phosphorylation of residue threonine-161 of the δ-opioid receptor: impaired receptor function and attenuated morphine antinociceptive tolerance. J. Neurosci. 29: 3551-3564.

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.