

Orexin R-1/2 (H-300): sc-28936

BACKGROUND

The hypothalamus is essential for maintaining homeostasis by integrating the vertebrate endocrine and nervous systems, thereby controlling temperature, thirst and hunger. Orexin-A and Orexin-B (also designated hypocretins) are hypothalamic neuropeptides that are derived from a single precursor, prepro-Orexin, by proteolytic processing. These peptides bind to and activate two closely related, G protein-coupled receptors, designated Orexin receptor-1 and Orexin receptor-2. Orexin-A protein and prepro-Orexin mRNA are localized to neurons within the lateral section of the hypothalamus, designated the "feeding center". Prepro-Orexin mRNA is up-regulated during fasting, suggesting that Orexins may play a role in the central feedback mechanism that regulates feeding behavior. Orexin has been shown to increase the release of GABA and glutamate from axons, a response seen as a result of most synaptic activities in the hypothalamic region.

REFERENCES

1. Sakurai, T., et al. 1998. Orexins and Orexin receptors: a family of hypothalamic neuropeptides and G protein-coupled receptors that regulate feeding behavior. *Cell* 92: 573-585.
2. Lund, P.E., et al. 2000. The orexin OX1 receptor activates a novel Ca²⁺ influx pathway necessary for coupling to phospholipase C. *J. Biol. Chem.* 275: 30806-30812.
3. Hervieu, G.J., et al. 2001. Gene expression and protein distribution of the orexin-1 receptor in the rat brain and spinal cord. *Neuroscience* 103: 777-797.
4. Guan, J.L., et al. 2002. Ultrastructural localization of orexin-1 receptor in pre- and post-synaptic neurons in the rat arcuate nucleus. *Neurosci. Lett.* 329: 209-212.

CHROMOSOMAL LOCATION

Genetic locus: HCRT1 (human) mapping to 1p35.2, HCRT2 (human) mapping to 6p12; Hcrtr1 (mouse) mapping to 4 D2.2, Hcrtr2 (mouse) mapping to 9 D.

SOURCE

Orexin R-1/2 (H-300) is a rabbit polyclonal antibody raised against amino acids 126-425 mapping at the C-terminus of Orexin R-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.

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.

APPLICATIONS

Orexin R-1/2 (H-300) is recommended for detection of Orexin R-1 and Orexin R-2 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).

Orexin R-1/2 (H-300) is also recommended for detection of Orexin R-1 and Orexin R-2 in additional species, including canine, bovine and porcine.

Molecular Weight of Orexin R-1: 56 kDa.

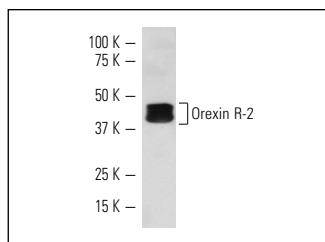
Molecular Weight of Orexin R-2: 40 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, SK-N-MC cell lysate: sc-2237 or SK-N-SH cell lysate: sc-2410.

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



Orexin R-1/2 (H-300): sc-28936. Western blot analysis of Orexin R-2 expression in Jurkat whole cell lysate.

RESEARCH USE

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

MONOS
Satisfaction
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Try **Orexin R-1/2 (E-9): sc-166111**, our highly recommended monoclonal alternative to Orexin R-1/2 (H-300).