SANTA CRUZ BIOTECHNOLOGY, INC.

Orexin-A (C-19): sc-8070

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.

CHROMOSOMAL LOCATION

Genetic locus: HCRT (human) mapping to 17q21.2; Hcrt (mouse) mapping to 11 D.

SOURCE

Orexin-A (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Orexin-A of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8070 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Orexin-A (C-19) is recommended for detection of Orexin-A processed active peptide of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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-A (C-19) is also recommended for detection of Orexin-A processed active peptide in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Orexin-A/B siRNA (h): sc-42152, Orexin-A/B siRNA (m): sc-42153, Orexin-A/B shRNA Plasmid (h): sc-42152-SH, Orexin-A/B shRNA Plasmid (m): sc-42153-SH, Orexin-A/B shRNA (h) Lentiviral Particles: sc-42152-V and Orexin-A/B shRNA (m) Lentiviral Particles: sc-42153-V.

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.

SELECT PRODUCT CITATIONS

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3. Morawski, M., et al. 2010. Neurons associated with aggrecan-based perineuronal nets are protected against tau pathology in subcortical regions in Alzheimer's disease. Neuroscience 169: 1347-1363.
4. Maolood, N., et al. 2010. Nociceptin/orphanin FQ peptide in hypothalamic neurones associated with the control of feeding behaviour. J. Neuroendocrinol. 22: 75-82.
5. Felix, K., et al. 2011. Identification of serum proteins involved in pancreatic cancer cachexia. Life Sci. 88: 218-225.
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7. Michinaga, S., et al. 2011. Orexin neurons in hypothalamic slice cultures are vulnerable to endoplasmic reticulum stress. Neuroscience 190: 289-300.
8. Lazarenko, R.M., et al. 2011. Orexin A activates retrotrapezoid neurons in mice. Respir. Physiol. Neurobiol. 175: 283-287.
9. Liu, X., et al. 2011. Molecular fingerprint of neuropeptide S-producing neurons in the mouse brain. J. Comp. Neurol. 519: 1847-1866.
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11. Del Cid-Pellitero, E., et al. 2011. Hypocretin1/OrexinA-containing axons innervate locus coeruleus neurons that project to the Rat medial prefrontal cortex. Implication in the sleep-wakefulness cycle and cortical activation. Synapse 65: 843-857.
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14. Laorden, M.L., et al. 2012. Hypothalamic orexin—a neurons are involved in the response of the brain stress system to morphine withdrawal. PLoS ONE 7: e36871.

MONOS Satisfaction Guaranteed

Try **Orexin-A (KK09): sc-80263**, our highly recommended monoclonal alternative to Orexin-A (C-19).