SANTA CRUZ BIOTECHNOLOGY, INC.

Orexin-B (N-14): sc-26492

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. Cambpell, N. 1990. Biology 2nd Ed. Redwood City: The Benjamin/Cummings Publishing Company, Inc. 916-921.
2. 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.
3. de Lecea, L., et al. 1998. The hypocretins: hypothalamus-specific peptides with neuroexcitatory activity. Proc. Natl. Acad. Sci. USA 95: 322-327.
4. Wolf, G. 1998. Orexins: a newly discovered family of hypothalamic regulators of food intake. Nutr. Rev. 56: 172-173.
5. van den Pol, A.N., et al. 1998. Presynaptic and postsynaptic actions and modulation of neuroendocrine neurons by a new hypothalamuic peptide, hypocretin/orexin. J. Neurosci. 18: 7962-7971.

CHROMOSOMAL LOCATION

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

SOURCE

Orexin-B (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of processed active peptide Orexin-B of Orexin-B of human origin.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-26492 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Orexin-B (N-14) is recommended for detection of Orexin-B 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).

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.

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) 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.