SANTA CRUZ BIOTECHNOLOGY, INC.

pro-MCH (1D1): sc-293231

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Melanin-concentrating hormone (MCH) is a 19 amino acid cyclic neuropeptide derived from a 165 amino acid pro-MCH precursor. In addition to the hormone, the pro-MCH precursor contains a 144 amino acid mature MCH as well as a 12 amino acid neuropeptide glycine-glutamic acid (NGE) and a 19 amino acid neuropeptide glutamic acid-isoleucine (NEI). Mainly expressed in the hypothalamus, the melanin-concentrating hormone modulates feeding behavior, aggression, anxiety, arousal and reproductive function in mammals by controlling the release of luteinizing hormone (LH). The melanin-concentrating hormone receptor (MCHR, also designated SLC-1) is a glycosylated G protein-coupled receptor. MCHR mediates the effects of MCH through $G_{\alpha\ i}$ and/or $G_{\alpha\ q}$ signaling and is expressed in several regions of the brain, including the cerebral cortex, amygdala, thalamus and hypothalamus. MCH and MCHR have also been implicated in stimulating leptin expression and secretion in adipocytes, suggesting that the melanin-concentrating hormone and its receptor may be potential targets for modulating obesity.

REFERENCES

1. Saito, Y., et al. 1999. Molecular characterization of the melanin-concentrating-hormone receptor. Nature 400: 265-269.
2. Drozdz, R., et al. 1999. (D-(p-benzoylphenylalanine) 13, tyrosine19)-melanin-concentrating hormone, a potent analogue for MCH receptor crosslinking. J. Pept. Sci. 5: 234-242.
3. Hervieu, G.J., et al. 2000. The distribution of the mRNA and protein products of the melanin-concentrating hormone (MCH) receptor gene, slc-1, in the central nervous system of the rat. Eur. J. Neurosci. 12: 1194-1216.
4. Murray, J.F., et al. 2000. Melanin-concentrating hormone, melanocortin receptors and regulation of luteinizing hormone release. J. Neuroendocrinol. 12: 217-223.
5. Murray, J.F., et al. 2000. The influence of gonadal steroids on pre-pro melanin-concentrating hormone mRNA in female rats. J. Neuroendocrinol. 12: 53-59.
6. Hawes, B.E., et al. 2000. The melanin-concentrating hormone receptor couples to multiple G proteins to activate diverse intracellular signaling pathways. Endocrinology 141: 4524-4532.
7. Bradley, R.L., et al. 2000. Melanin-concentrating hormone regulates leptin synthesis and secretion in rat adipocytes. Diabetes 49: 1073-1077.

CHROMOSOMAL LOCATION

Genetic locus: PMCH (human) mapping to 12q23.2.

SOURCE

pro-MCH (1D1) is a mouse monoclonal antibody raised against amino acids 1-165 representing full length pro-MCH of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

pro-MCH (1D1) is recommended for detection of pro-MCH of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

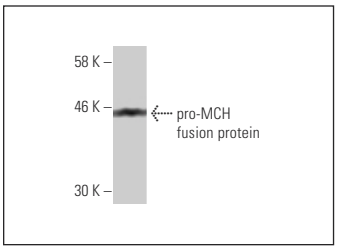
Suitable for use as control antibody for pro-MCH siRNA (h): sc-42015, pro-MCH shRNA Plasmid (h): sc-42015-SH and pro-MCH shRNA (h) Lentiviral Particles: sc-42015-V.

Molecular Weight of pro-MCH: 45-50 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



pro-MCH (1D1): sc-293231. Western blot analysis of human recombinant pro-MCH fusion protein.

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 for detailed protocols and support products.