

pro-MCH (C-20): sc-14509

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_{αi} and/or G_{αq} 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.

CHROMOSOMAL LOCATION

Genetic locus: PMCH (human) mapping to 12q23.2; Pmch (mouse) mapping to 10 C1.

SOURCE

pro-MCH (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of pro-MCH precursor 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.

Blocking peptide available for competition studies, sc-14509 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

pro-MCH (C-20) is recommended for detection of mature MCH, pro-MCH and Neuropeptide E-I 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); non cross-reactive with Neuropeptide G-E or melanin-concentrating hormone.

pro-MCH (C-20) is also recommended for detection of mature MCH, pro-MCH and Neuropeptide E-I in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for pro-MCH siRNA (h): sc-42015, pro-MCH siRNA (m): sc-42016, pro-MCH shRNA Plasmid (h): sc-42015-SH, pro-MCH shRNA Plasmid (m): sc-42016-SH, pro-MCH shRNA (h) Lentiviral Particles: sc-42015-V and pro-MCH shRNA (m) Lentiviral Particles: sc-42016-V.

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

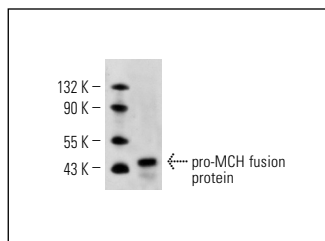
RESEARCH USE

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

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



pro-MCH (C-20): sc-14509. Western blot analysis of human recombinant pro-MCH fusion protein.

SELECT PRODUCT CITATIONS

1. Deurveilher, S., et al. 2006. Differential c-Fos immunoreactivity in arousal-promoting cell groups following systemic administration of caffeine in rats. *J. Comp. Neurol.* 498: 667-689.
2. Verty, A.N., et al. 2009. Involvement of hypothalamic peptides in the anorectic action of the CB1 receptor antagonist rimonabant (SR 141716). *Eur. J. Neurosci.* 29: 2207-2216.
3. Maolood, N., et al. 2010. Nociceptin/orphanin FQ peptide in hypothalamic neurones associated with the control of feeding behaviour. *J. Neuroendocrinol.* 22: 75-82.
4. Hollis, J.H., et al. 2010. Central interleukin-10 attenuates lipopolysaccharide-induced changes in food intake, energy expenditure and hypothalamic Fos expression. *Neuropharmacology* 58: 730-738.
5. Michinaga, S., et al. 2011. Orexin neurons in hypothalamic slice cultures are vulnerable to endoplasmic reticulum stress. *Neuroscience* 190: 289-300.
6. Schele, E., et al. 2012. Interleukin-6 receptor α is co-localised with melanin-concentrating hormone in human and mouse hypothalamus. *J. Neuroendocrinol.* 24: 930-943.
7. Adler, E.S., et al. 2012. Neurochemical characterization and sexual dimorphism of projections from the brain to abdominal and subcutaneous white adipose tissue in the rat. *J. Neurosci.* 32: 15913-15921.
8. Whiddon, B.B., et al. 2013. Ablation of neurons expressing melanin-concentrating hormone (MCH) in adult mice improves glucose tolerance independent of MCH signaling. *J. Neurosci.* 33: 2009-2016.


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