

MC4-R (S-18): sc-6881

BACKGROUND

The melanocortin family comprises the α -, β - and γ - melanocyte stimulating hormones (MSH) and adrenocorticotrophin. The receptors for these hormones are seven-transmembrane G protein-coupled proteins that activate adenylyl cyclase. Five melanocortin receptors have been cloned and shown to exhibit different affinities and patterns of expression. MC1-R (MSH-R) is expressed in melanocytes and corticoadrenal tissue. MC2-R is the ACTH receptor and is expressed primarily in the adrenal cortex. MC3-R has been found in specific regions of the brain and is also expressed in placenta and gut. MC4-R is expressed primarily in brain, while MC5-R is expressed at low levels in most tissues.

REFERENCES

1. Mountjoy, K.G., et al. 1992. The cloning of a family of genes that encode the melanocortin receptors. *Science* 257: 1248-1251.
2. Chhajlani, V., et al. 1992. Molecular cloning and expression of the human melanocyte stimulating hormone receptor cDNA. *FEBS Lett.* 309: 417-420.
3. Gantz, I., et al. 1993. Molecular cloning of a novel melanocortin receptor. *J. Biol. Chem.* 268: 8246-8250.
4. Roselli-Reh fuss, L., et al 1993. Identification of a receptor for γ melanotropin and other proopiomelanocortin peptides in the hypothalamus and limbic system. *Proc. Natl. Acad. Sci. USA* 90: 8856-8860.
5. Gantz, I., et al. 1993. Molecular cloning, expression and gene localization of a fourth melanocortin receptor. *J. Biol. Chem.* 268: 15174-15179.
6. Chhajlani, V., et al. 1993. Molecular cloning of a novel human melanocortin receptor. *Biochem. Biophys. Res. Commun.* 195: 866-873.
7. Mountjoy, K.G., et al. 1994. Localization of the melanocortin-4 receptor (MC4-R) in neuroendocrine and autonomic control circuits in the brain. *Mol. Endocrinol.* 8: 1298-1308.
8. Labbe, O., et al. 1994. Molecular cloning of a mouse melanocortin 5 receptor gene widely expressed in peripheral tissues. *Biochemistry* 33: 4543-4549.

SOURCE

MC4-R (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MC4-R of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-6881 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

MC4-R (S-18) is recommended for detection of MC4-R and, to a lesser extent, MC1-R, MC3-R and MC5-R 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).

MC4-R (S-18) is also recommended for detection of MC4-R and, to a lesser extent, MC1-R, MC3-R and MC5-R in additional species, including equine, canine, bovine, porcine and avian.

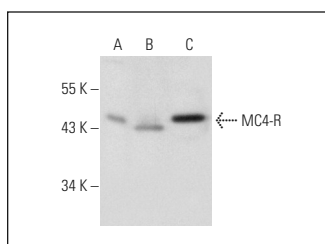
Molecular Weight of MC4-R: 40 kDa.

Positive Controls: rat cerebellum extract: sc-2398, EOC 20 whole cell lysate: sc-364187 or human brain hippocampus extract: sc-364375.

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.

DATA



MC4-R (S-18): sc-6881. Western blot analysis of MC4-R expression in EOC 20 whole cell lysate (A) and human hippocampus (B) and rat cerebellum (C) tissue extracts.

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.

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Try **MC4-R (C-10): sc-55567**, our highly recommended monoclonal alternative to MC4-R (S-18).