

# MC5-R (C-18): sc-7644

## BACKGROUND

The melanocortin family comprises the  $\alpha$ -,  $\beta$ - and  $\gamma$ -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. Gantz, I., et al. 1993. Molecular cloning, expression and gene localization of a fourth melanocortin receptor. *J. Biol. Chem.* 268: 15174-15179.
5. Roselli-Rehffuss, L., et al. 1993. Identification of a receptor for  $\gamma$ -melanotropin and other pro-opiomelanocortin peptides in the hypothalamus and limbic system. *Proc. Natl. Acad. Sci. USA* 90: 8856-8860.
6. Chhajlani, V., et al. 1993. Molecular cloning of a novel human melanocortin receptor. *Biochem. Biophys. Res. Commun.* 195: 866-873.

## CHROMOSOMAL LOCATION

Genetic locus: MC5R (human) mapping to 18p11.21; Mc5r (mouse) mapping to 18 E2.

## SOURCE

MC5-R (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MC5-R of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-7644 P, (100  $\mu$ 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.

## RESEARCH USE

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

## APPLICATIONS

MC5-R (C-18) is recommended for detection of MC5-R of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MC5-R (C-18) is also recommended for detection of MC5-R in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for MC5-R siRNA (h): sc-35875, MC5-R siRNA (m): sc-35876, MC5-R shRNA Plasmid (h): sc-35875-SH, MC5-R shRNA Plasmid (m): sc-35876-SH, MC5-R shRNA (h) Lentiviral Particles: sc-35875-V and MC5-R shRNA (m) Lentiviral Particles: sc-35876-V.

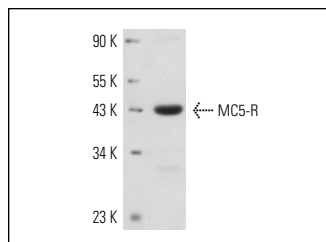
Molecular Weight of MC5-R: 45 kDa.

Positive Controls: Rat skeletal muscle tissue extract: sc-364810.

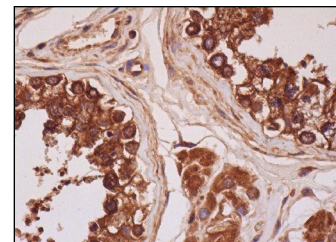
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



MC5-R (C-18): sc-7644. Western blot analysis of MC5-R expression in rat skeletal muscle tissue extract.



MC5-R (C-18): sc-7644. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and membrane staining of cells in seminiferous ducts and cytoplasmic staining of Leydig cells.

## SELECT PRODUCT CITATIONS

1. Hatta, N., et al. 2001. Expression, candidate gene, and population studies of the melanocortin 5 receptor. *J. Invest. Dermatol.* 116: 564-570.
2. Zhang, L., et al. 2006. Melanocortin-5 receptor: a marker of human sebocyte differentiation. *Peptides* 27: 413-420.