

# MC1-R (N-19): sc-6875

## 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 adenyl 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-Rehffuss, L., et al. 1993. Identification of a receptor for  $\gamma$  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.

## CHROMOSOMAL LOCATION

Genetic locus: MC1R (human) mapping to 16q24.3; Mc1r (mouse) mapping to 8 E1.

## SOURCE

MC1-R (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of MC1-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-6875 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

MC1-R (N-19) is recommended for detection of MC1-R of human and, to a lesser extent, mouse and rat 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 MC1-R siRNA (h): sc-40107, MC1-R siRNA (m): sc-40108, MC1-R shRNA Plasmid (h): sc-40107-SH, MC1-R shRNA Plasmid (m): sc-40108-SH, MC1-R shRNA (h) Lentiviral Particles: sc-40107-V and MC1-R shRNA (m) Lentiviral Particles: sc-40108-V.

Molecular Weight of MC1-R: 34 kDa.

## 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.

## SELECT PRODUCT CITATIONS

1. Teare, K.A., et al. 2003.  $\alpha$ -MSH inhibits inflammatory signalling in olfactory ensheathing cells. *Neuroreport* 14: 2171-2175.
2. Teare, K.A., et al. 2004.  $\alpha$ -MSH inhibits inflammatory signalling in Schwann cells. *Neuroreport* 15: 493-498.
3. Ren, G., et al. 2009. PET of malignant melanoma using 18F-labeled metallopeptides. *J. Nucl. Med.* 50: 1865-1872.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.