

MC3-R (H-88): sc-8990

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 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 examined.

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 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.

CHROMOSOMAL LOCATION

Genetic locus: MC3R (human) mapping to 20q13.2; Mc3r (mouse) mapping to 2 H3.

SOURCE

MC3-R (H-88) is a rabbit polyclonal antibody raised against amino acids 1-88 of MC3-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.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

MC3-R (H-88) is recommended for detection of MC3-R of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for MC3-R siRNA (h): sc-40111, MC3-R siRNA (m): sc-40112, MC3-R shRNA Plasmid (h): sc-40111-SH, MC3-R shRNA Plasmid (m): sc-40112-SH, MC3-R shRNA (h) Lentiviral Particles: sc-40111-V and MC3-R shRNA (m) Lentiviral Particles: sc-40112-V.

Molecular Weight of MC3-R: 36 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Ni, X.P., et al. 2005. Modulation by dietary sodium intake of melanocortin 3 receptor mRNA and protein abundance in the rat kidney. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 290: 560-567.
2. Tai, M.H., et al. 2007. Role of nitric oxide in α -melanocyte-stimulating hormone-induced hypotension in the nucleus tractus solitarii of the spontaneously hypertensive rats. *J. Pharmacol. Exp. Ther.* 321: 455-461.
3. Li, D., et al. 2008. Diminishment of α -MSH anti-inflammatory activity in MC1-R siRNA-transfected RAW 264.7 macrophages. *J. Leukoc. Biol.* 84: 191-198.

RESEARCH USE

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