

Product datasheet for **TA328872**

Mc3r Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	FC, IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3,000; FC: 1:50-1:600
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)NSDSLTLLEDQFIQHMD, corresponding to amino acid residues 102-117 of rat MC3R. 1st extracellular loop.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.025% NaN ₃ .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	melanocortin 3 receptor
Database Link:	NP_001020441 Entrez Gene 4159 Human Entrez Gene 17201 Mouse Entrez Gene 29310 Rat P32244



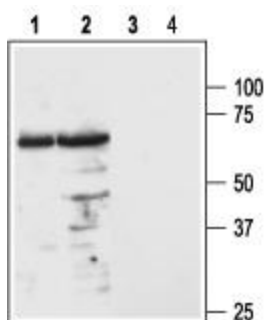
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Background:

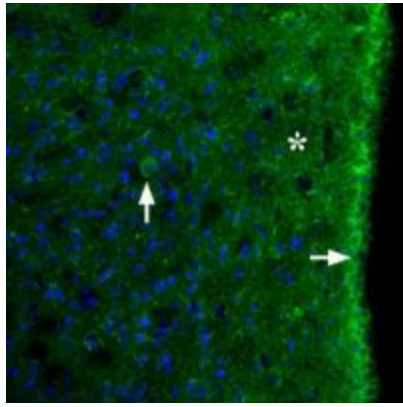
Melanocortin Receptor 3 (MC3R) is one of five members of the melanocortin receptor family, which belongs to the 7-transmembrane domain, G protein-coupled receptor (GPCR) superfamily. The ligands of these receptors, the melanocortins, are a group of structurally-related peptides comprising the α -, β -, and γ -melanocyte-stimulating hormone (α -, β -, γ -MSH) and the adrenocorticotrophic hormone (ACTH), all of which are derived from post-translational processing of a common precursor peptide, proopiomelanocortin (POMC). One of the salient features of the melanocortin signaling system is the presence of two endogenous antagonists, proteins that bind specifically to the receptor and have an inhibitory effect. These antagonist proteins are termed agouti (or agouti signaling protein, ASP) and agouti-related protein (AGRP). All five melanocortin receptors bind their agonists (the melanocortins) and their endogenous antagonists (agouti and AGRP) with differing affinities. MC3R is the only one of the melanocortin receptors that shows no difference in binding specificity for any of the melanocortins, binding all of them with equal efficiency. AGRP is the high affinity endogenous antagonist of MC3R. The physiological function of MC3R is still poorly understood. The distribution of MC3R in hypothalamic nuclei of the central nervous system (CNS) suggests a role in the regulation of energy homeostasis. Indeed, studies with MC3R knockout (MC3R KO) mice showed that these mice have increased body fat due to increased feed efficiency. In humans, several polymorphisms of the MC3R gene are associated with high insulin levels and obesity in children. In addition, expression of MC3R in macrophages is thought to mediate the well known anti-inflammatory effects of α -MSH.

Synonyms:

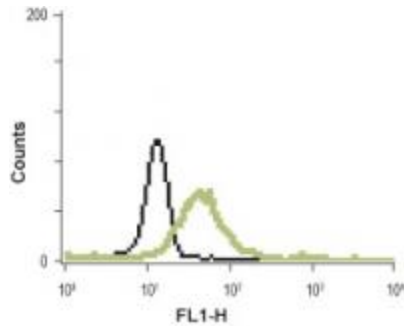
BMIQ9; MC3; MC3-R; OB20; OQTL

Product images:

Western blot analysis of mouse (lanes 1 and 3) and rat (lanes 2 and 4) brain lysates: 1, 2. Anti-Melanocortin Receptor 3 (extracellular) antibody, (1:200). 3, 4. Anti-Melanocortin Receptor 3 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of MC3R in rat brain. Immunohistochemical staining of perfusion-fixed frozen rat brain sections using Anti-Melanocortin Receptor 3 (extracellular) antibody, (1:100). Expression (green fluorescence) appears in the hypothalamic periventricular region (horizontal arrow), in some nerve cells (vertical arrow), and in the neuropil (asterisk). Hoechst 33342 is used as the counterstain (blue).



Indirect flow cytometry analysis in human promyelocytic leukemia HL-60 cells. black line, Cells + FITC-conjugated goat anti-rabbit antibody. green line, Cells + Anti-Melanocortin Receptor 3 (extracellular) antibody, (1:40) + FITC conjugated goat anti-rabbit antibody.