

Product datasheet for **TA328604**

MC2 receptor (MC2R) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)RNMGYLKPRGSFE, corresponding to amino acid residues 87-99 of human MC2R.
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 2 receptor
Database Link:	NP_000520 Entrez Gene 282839 Rat Q01718



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Background:

Melanocortin Receptor 2 (MC2R) belongs to a five-member receptor family known as the melanocortin receptors. The melanocortin receptors are members of the 7 transmembrane domain, G protein-coupled receptor (GPCR) superfamily. The receptors ligands, the melanocortins, are a group of structurally derived peptides consisting of α -, β - and γ -melanocyte stimulating hormone (α -, β -, γ -MSH) and the adrenocorticotrophic hormone (ACTH) all of which are derived from the post-translational processing of a common precursor peptide, proopiomelanocortin (POMC). One of the most salient features of the melanocortin signaling system is the presence of two endogenous antagonists, that is proteins that bind specifically to the receptor but instead of activating it have an inhibitory effect. The 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 different affinities. MC2R can be also described as the ACTH receptor as it is exclusively activated by the ACTH hormone. In fact, MC2R mediates all the physiological effects of ACTH in the adrenal cortex, that is the regulation and production of steroids, their circadian variation and their stress-related fluctuations. In addition, mutations that result in MC2R functional impairment are associated with familial glucocorticoid deficiency. The receptor transduces signals via Gs resulting in the activation of adenylate cyclase and production of cAMP.

Synonyms:

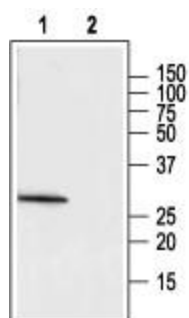
ACTHR

Protein Families:

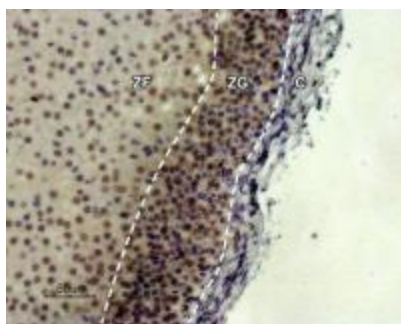
Druggable Genome, GPCR, Transmembrane

Protein Pathways:

Neuroactive ligand-receptor interaction

Product images:

Western blot analysis of rat adrenal lysate: 1. Anti-Melanocortin Receptor 2 (extracellular) antibody (1:400). 2. Anti-Melanocortin Receptor 2 (extracellular) antibody, preincubated with the control peptide antigen.



IHC staining of paraffin embedded rat adrenal cortex section using Anti-Melanocortin Receptor 2 (extracellular) antibody (1:100). Shown are the capsule (C), the zona glomerulosa (ZG) and the zona fasciculata (ZF) of the adrenal cortex. Note that the staining brown is specific for cells of the adrenal gland while no staining is present in the dense connective tissue of the capsule. Color reaction was obtained with DAB. H&E is used as the counterstain.