

MC4 Receptor Antibody

Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP51334

Specification

MC4 Receptor Antibody - Product Information

Application WB, IHC-P, E
Primary Accession P32245
Reactivity Human, Mouse, Rat

Host Rabbit
Clonality Polyclonal
Calculated MW 37 KDa

MC4 Receptor Antibody - Additional Information

Gene ID 4160

Other Names

Melanocortin receptor 4, MC4-R, MC4R

Target/Specificity

KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human MC4 Receptor. The exact sequence is proprietary.

Dilution

WB~~1:1000 IHC-P~~N/A E~~N/A

Format

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

Storage

Store at -20 °C. Stable for 12 months from date of receipt

MC4 Receptor Antibody - Protein Information

Name MC4R

Function

Hormone receptor that acts as a key component of the leptin- melanocortin pathway at the intersection of homeostatic maintenance of energetic state (PubMed:32327598, PubMed:33858992). Plays a role in regulating food intake: activation by a stimulating hormone such as anorexigenic alpha-melanocyte stimulating hormone (alpha-MSH) inhibits appetite, whereas binding to a natural antagonist like Agouti-related protein/AGRP promotes appetite. G-protein-coupled receptor that activates conventional Galphas signaling leading to induction of anorexogenic signaling in the



hypothalamus to result in negative energy balance (PubMed:33858992). Regulates the firing activity of neurons from the hypothalamus by alpha-MSH and AGRP independently of Galphas signaling by ligand-induced coupling of closure of inwardly rectifying potassium channel KCNJ13 (By similarity). In intestinal epithelial cells, plays a role in the inhibition of hepatic glucose production via nesfatin-1/NUCB2 leading to increased cyclic adenosine monophosphate (cAMP) levels and glucagon-like peptide 1 (GLP-1) secretion in the intestinal epithelium (PubMed:39562740).

Cellular Location

Cell membrane; Multi-pass membrane protein

Tissue Location

Brain, placental, and gut tissues.

MC4 Receptor Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

MC4 Receptor Antibody - Images

MC4 Receptor Antibody - Background

Receptor specific to the heptapeptide core common to adrenocorticotropic hormone and alpha-, beta-, and gamma-MSH. Plays a central role in energy homeostasis and somatic growth. This receptor is mediated by G proteins that stimulate adenylate cyclase (cAMP).

MC4 Receptor Antibody - References

Gantz I., et al. J. Biol. Chem. 268:15174-15179(1993).

Mountjoy K.G., et al. Mol. Endocrinol. 8:1298-1308(1994).

Konatz S.A., et al. Submitted (IAN 2003) to the EMPL (GanBank).

Kopatz S.A., et al. Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases.

Ota T., et al. Nat. Genet. 36:40-45(2004).

Mural R.J., et al. Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.