Melanocortin-4 Receptor Polyclonal Antibody
Item No. 10006355

Overview and Properties

Contents: This vial contains 500 µl of peptide affinity-purified antibody.
Synonyms: MC4R
Immunogen: Peptide from the N-terminal region of mouse protein MC4R
Species Reactivity: (+) Human, mouse, and rat MC4R
Uniprot No.: Q16236
Form: Liquid
Storage: -20°C (as supplied)
Stability: As supplied, 1 year from the QC date provided on the Certificate of Analysis, when stored properly
Storage Buffer: TBS, pH 7.4, containing 50% glycerol, 0.1% BSA, and 0.02% sodium azide
Host: Rabbit
Applications: Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution for IHC (formalin-fixed paraffin-embedded sections) is 1:300 and 1:200 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image(s)

Lane 1: Human cerebella cortex pellet (30 µg)
Lane 2: Human hippocampus homogenate (30 µg)
Melanocortins are known to exert a broad array of physiological actions including "melanogenesis, steroidogenesis, sexual function and inflammation, as well as appetite regulation and energy homeostasis". These actions are mediated (differentially or concurrently) in part by a family of G-protein coupled receptors, the melanocortin receptors 1-5 (MC1R-MC5R). Melanocortin-4 receptor (MC4R) was first cloned in 1993 with transcripts expressed primarily in the brain. Genetic studies of mice and humans have established a critical role of MC4R in appetite regulation. Heterozygous mutations in MC4R account for 1-6% of severe cases of human obesity. Thus, MC4R has been a prime target for therapeutic intervention in obesity.

All known mammalian MC4Rs are 332 amino acids in length with an estimated molecular weight of 37 kDa. The protein is heavily glycosylated and appears at multiple positions on SDS-PAGE. Cayman’s MC4R polyclonal antibody mainly detects an unglycosylated protein at 37 kDa and a glycosylated protein at 55 kDa.

References