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Datasheet for 600-401-CR7

MC4R Antibody

Overview

Description:	Anti-MC4R (RABBIT) Antibody - 600-401-CR7
Item No.:	600-401-CR7
Size:	100 µg
Applications:	ELISA, IF, IHC, WB
Reactivity:	Human, Mouse, Rat
Host Species:	Rabbit

Product Details

Background:	The melanocortin-4 receptor (MC4R) is a member of the superfamily of seven transmembrane G-protein coupled receptors that are involved in multiple signal transduction pathways including the cAMP and MAPK signaling pathways. It is thought that the melanocortin system modulates energy expenditure and insulin sensitivity; activation of the MC4R results in the inhibition of c-Jun N-terminal kinase (JNK) activity and promotes insulin signaling. MC4R-null mice display maturity onset obesity characterized by hyperphagia, increased adiposity, hyperinsulinaemia and hyperleptinaemia, suggesting that like other obesity-linked genes such as FTO, PTER, and NPC1, MC4R is a potential candidate target for the treatment of obesity.
Synonyms:	MC4R Antibody, Melanocortin receptor 4, MC4-R
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	MC4R
Reactivity:	Human, Mouse, Rat
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-MC4R antibody was prepared from whole rabbit serum produced by repeated immunizations with a 19 amino acid synthetic peptide near the N-terminus of human MC4R.

Purity/Specificity:	Anti-MC4R Antibody was affinity purified from monospecific antiserum by immunoaffinity chromatography. Cross reactivity with MC4R from other sources has not been determined.
Relevant Links:	• UniProtKB - P32245 • GeneID - 4160 • NCBI - NP_005903

Application Details

Tested Applications:	ELISA, IF, IHC, WB
Application Note:	Anti-MC4R Antibody has been tested for use in ELISA, Western Blotting, Immunohistochemistry and Immunofluorescence. Specific conditions for reactivity should be optimized by the end user. Expect a band at approximately 37 kDa in Western Blots of specific cell lysates and tissues.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000
IF:	20 µg/mL
IHC:	2.5 µg/mL
WB:	1 µg/mL

Formulation

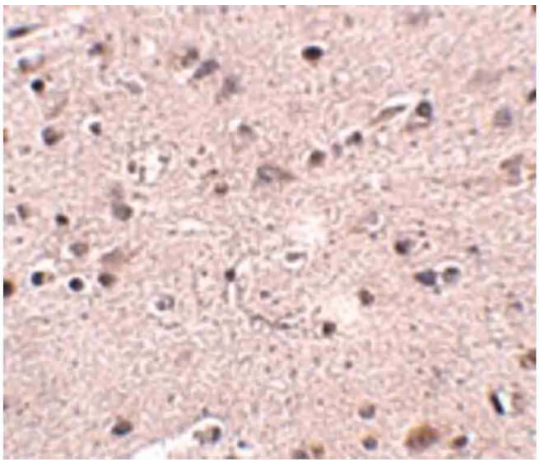
Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.01 M Sodium Phosphate, 0.25 M Sodium Chloride, pH 7.2
Preservative:	0.02% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

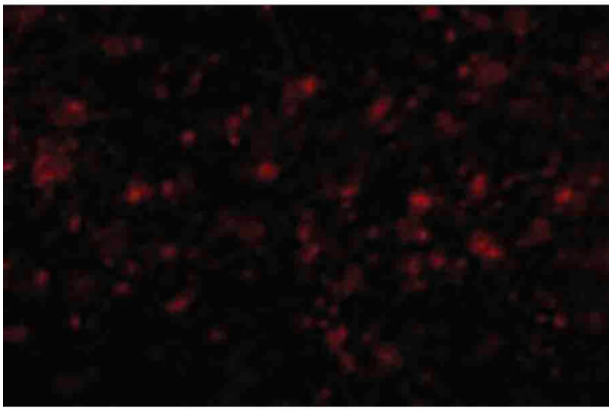
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Expiration: Expiration date is one (1) year from date of receipt.

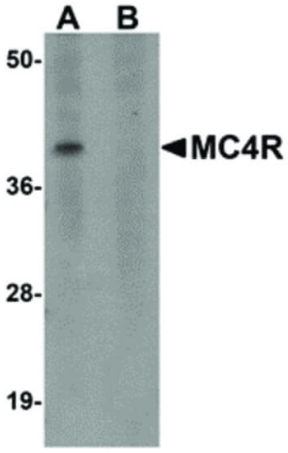
Images



Immunohistochemistry
Immunohistochemistry of MC4R antibody. Tissue: human brain tissue. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: MC4R antibody at 2.5 µg/mL for 1 h at RT. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: MC4R is a membrane protein. Staining: MC4R as precipitated pink signal with blue nuclear counterstain.



Immunofluorescence Microscopy
Immunofluorescence Microscopy of MC4R antibody. Tissue: human brain cells. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: MC4R antibody at 20 µg/mL for 1 h at RT. Secondary antibody: Fluorescein rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: MC4R is a membrane protein. Staining: MC4R as red fluorescent signal.



Western Blot
Western Blot of MC4R antibody. Lane 1: Rat brain tissue lysate with MC4R antibody at 1 µg/mL in the absence of blocking peptide. Lane 2: Rat brain tissue lysate with MC4R antibody at 1 µg/mL in the presence of blocking peptide. Load: 35 µg per lane. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 37 kDa, 40 kDa for MC4R. Other band(s): MC4R splice variants and isoforms.

References

- Fujima S et al. CAPS2 deficiency induces proopiomelanocortin accumulation in pituitary and affects food intake behavior in mice. *Neurosci Lett.* (2020)

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