

Melanin-Concentrating Hormone (MCH) Antibodies

Cat. # MCH51-S	Rabbit Anti-Human MCH Antiserum	SIZE: 100 ul
Cat. # MCH51-A	Rabbit Anti Human MCH IgG (aff pure)	SIZE: 100 ug
Cat. # MCH51-P	Human MCH control peptide	SIZE: 100 ug

Melanin-concentrating hormone (MCH) is a cyclic neuropeptide (human/rat 19 aa) that regulates a variety of functions in mammalian brain, in particular feeding behavior. MCH is synthesized in mainly in the lateral hypothalamus and zona incerta. MCH stimulates feeding, its level is unregulated in the hypothalamus of genetically obese mice, and mice lacking MCH eat less and are lean. MCH is thought to influence feeding and energy balance by acting downstream of leptin and the melanocortin system. However, molecular mechanisms of these diverse actions of MCH remain poorly understood, as its receptor was not identified.

Recently, an orphan G-protein coupled receptor (SLC-1, GPR24) has been identified as the receptor of MCH. MCH receptor (**MCHR**; human 402 aa, rat 353 aa) is predicted to contain 7 transmembrane domains, a feature typical of G-protein coupled receptors. It is primarily expressed in the ventromedial and dorsomedial nuclei of the hypothalamus. Moderate levels of MCHR are also found in the eye and skeletal muscle, tongue, and pituitary. MCHR binds MCH with sub-nanomolar affinity, and is stimulated by MCH to mobilize intracellular Ca and reduce forskolin-elevated cAMP levels.

Source of Antigen and Antibodies

Antigen	Human full length MCH (1) ; Designated (MCH51-P or control peptide) conjugated to KLH
Ab Host/type	Rabbit, Polyclonal antiserum # MCH51-S and IgG, purified over antigen-agarose (Cat # MCH51-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

100ul solution lyophilized powder
Supplied 0.05% azide, **Reconstitute** powder in 100 ul PBS

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using Chemiluminescence technique).

ELISA (1:10K-1:100K; using 50-100 ng of control peptide/well).

Histochemistry & Immunofluorescence: Not tested. We recommend the use of affinity purified antibody at 2-20 ug/ml.

Specificity & Cross-reactivity

The human MCH51-P peptide sequence is 100% conserved in human mouse, and rat, and 76% in the fish. No significant sequence homology of MCH51-P is seen with other peptide hormones. Antibody crossreactivity in various species is not established. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol see detailed protocol at the web site).).

General References:

Nahon, JL et al (1989) Endocrinol. 125, 2056-2065; Thompson, RC et al (1990) DNA Cell Biol. 9, 637-645; Vaughan JM et al (1989) Endocrinol. 125, 1660-1665; Presse F et al (1990) Mol. Endocrinol. 4, 632-637; Breton C et al (1993) Brain Res. 18, 297-310

*This product is for *in vitro* research use only.

Antibodies to melanocortin receptors (MCR1-5), and MCH R

MCH51-S-A-P 71214A