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Anti-MC1 Receptor Picoband Antibody

Catalog # ABO10117

Product Information

Application	WB
Primary Accession	Q01726
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Melanocyte-stimulating hormone receptor(MC1R) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	4157
Other Names	Melanocyte-stimulating hormone receptor, MSH-R, Melanocortin receptor 1, MC1-R, MC1R, MSHR
Calculated MW	34706
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Cell membrane; Multi-pass membrane protein.
Tissue Specificity	Melanocytes and corticoadrenal tissue.
Source	Eukaryota
Protein Name	Melanocyte-stimulating hormone receptor
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human MC1 Receptor (290-317aa NAIIDPLIYAFHSQELRRTLKEVLTCSW).
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

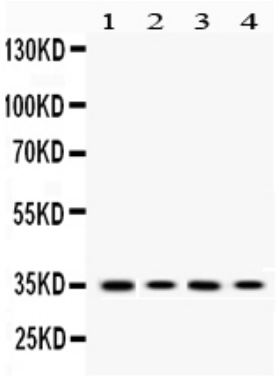
Protein Information

Name	MC1R (HGNC:6929)
Synonyms	MSHR
Function	G protein-coupled receptor that binds melanocyte-stimulating hormones (alpha, beta, and gamma-MSH) and adrenocorticotropic hormone/ACTH, which are peptide products of the POMC precursor protein (PubMed:11442765, PubMed:11707265, PubMed:1325670, PubMed:1516719, PubMed:8463333). Upon activation, MC1R couples with the G(s) protein, stimulating adenylate cyclase and activating the cAMP-dependent signaling pathway. This activation promotes melanogenesis, resulting in the production of eumelanin (black/brown) and pheomelanin (red/yellow) in melanocytes (PubMed:11707265, PubMed:1325670, PubMed:16463023, PubMed:19737927, PubMed:31097585, PubMed:34453129). MC1R interacts with G protein-coupled receptor opsin 3/OPN3, which couples to G(i) proteins and inhibits the alpha-MSH-induced cAMP response, thereby reducing melanin synthesis (PubMed:31097585). Binding to Agouti/ASP precludes alpha-MSH-induced signaling, thereby down-regulating melanogenesis (By similarity). Additionally, interaction with MGRN1 displaces the G(s) protein, further suppressing MC1R signaling (PubMed:19737927).
Cellular Location	Cell membrane; Multi-pass membrane protein
Tissue Location	Expressed in melanocytes (PubMed:1325670, PubMed:31097585). Expressed in corticoadrenal tissue (PubMed:1325670)

Background

The melanocortin 1 receptor (MC1R), mapped to 16q24.3, is also known as MSHR. This intronless gene encodes the receptor protein for melanocyte-stimulating hormone (MSH). The encoded protein, a seven pass transmembrane G protein coupled receptor, controls melanogenesis. Two types of melanin exist: red pheomelanin and black eumelanin. Gene mutations that lead to a loss in function are associated with increased pheomelanin production, which leads to lighter skin and hair color. Eumelanin is photoprotective but pheomelanin may contribute to UV-induced skin damage by generating free radicals upon UV radiation. Binding of MSH to its receptor activates the receptor and stimulates eumelanin synthesis. This receptor is a major determining factor in sun sensitivity and is a genetic risk factor for melanoma and non-melanoma skin cancer. Over 30 variant alleles have been identified which correlate with skin and hair color, providing evidence that this gene is an important component in determining normal human pigment variation.

Images



Western blot analysis of MC1 Receptor expression in PC12 whole cell lysates (lane 1), HEPA1-6 whole cell lysates (lane 2), HELA whole cell lysates (lane 3) and A375 whole cell lysates (lane 4). MC1 Receptor at 35KD was detected using rabbit anti- MC1 Receptor Antigen Affinity purified polyclonal antibody (Catalog #ABO10117) at 0.5 □¼g/mL. The blot was developed using chemiluminescence (ECL) method .

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.