

Datasheet for ABIN2746858

MC4R Protein

[Go to Product page](#)

Overview

Quantity:	5 applications
Target:	MC4R
Origin:	Human, Mouse, Rat
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Application:	Western Blotting (WB), Positive Control (PC)

Product Details

Purpose:	Purified Protein in ready-to-use SDS sample buffer.
Purification:	Purified Protein

Target Details

Target:	MC4R
Alternative Name:	MC4 Receptor (MC4R Products)
Background:	Melanocortin receptors are members of the rhodopsin family of 7-trans membrane G protein-coupled receptors that are involved in multiple signal transduction pathways including the cAMP and MAPK signaling pathways. These receptors are activated by members of the Melanocortin family: alpha-, beta- and Gammamelanocyte stimulating hormone (MSH) and adrenocorticotrophic hormone (ACTH). The Melanocortins are involved in a wide range of physiological functions, including pigmentation, energy homeostasis, inflammation, immunomodulation, steroidogenesis and temperature control. There are five melanocortin receptor subtypes each of which has a different pattern of tissue expression with the relative

Target Details

potency of different melanocortin peptides. The melanocortin signaling system consists of two endogenous antagonists that bind specifically to the receptor but instead of activating they have an inhibitory effect. The antagonist proteins are termed agouti (or agouti signaling protein, ASP) and agouti-related protein (AGRP). Melanocortin-4 receptor (MC4R) transcripts are expressed primarily in the brain. Genetic studies of mice and humans established a critical role of MC4R in appetite regulation. MC4R has been implicated in weight regulation and defects in this gene are a cause of autosomal dominant obesity. Activation of 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 obesity-linked gene, such as, MC4R is a potential candidate target for the treatment of obesity. Heterozygous mutations in MC4R account for 1-6 % of severe cases of human obesity. All known mammalian MC4Rs are 332 amino acids in length with an estimated molecular weight of 40 kDa. The protein is heavily glycosylated and appears at multiple positions on SDS-PAGE. The gene for MC4R is present on chromosome 18q22.

Molecular Weight:	40 kDa
NCBI Accession:	NP_005903
UniProt:	P32245
Pathways:	Hormone Transport , cAMP Metabolic Process , Feeding Behaviour

Application Details

Application Notes:	The sample is in ready-to-use buffer for application in SDS-PAGE and Western blotting.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	For 5 applications, volume varies from 100-200 µL in reduced SDS-PAGE sample buffer.
Storage:	-20 °C
Storage Comment:	-20 °C for long term storage