

## MC4R Protein, Mouse (Cell-Free, His)

Cat. No.:	HY-P702372
Synonyms:	Melanocortin receptor 4; MC4-R
Species:	Mouse
Source:	E. coli Cell-free
Accession:	P56450 (M1-Y332)
Gene ID:	17202
Molecular Weight:	43.0 kDa

### PROPERTIES

#### AA Sequence

```

M N S T H H H G M Y   T S L H L W N R S S   Y G L H G N A S E S   L G K G H P D G G C
Y E Q L F V S P E V   F V T L G V I S L L   E N I L V I V A I A   K N K N L H S P M Y
F F I C S L A V A D   M L V S V S N G S E   T I V I T L L N S T   D T D A Q S F T V N
I D N V I D S V I C   S S L L A S I C S L   L S I A V D R Y F T   I F Y A L Q Y H N I
M T V R R V G I I I   S C I W A A C T V S   G V L F I I Y S D S   S A V I I C L I S M
F F T M L V L M A S   L Y V H M F L M A R   L H I K R I A V L P   G T G T I R Q G T N
M K G A I T L T I L   I G V F V V C W A P   F F L H L L F Y I S   C P Q N P Y C V C F
M S H F N L Y L I L   I M C N A V I D P L   I Y A L R S Q E L R   K T F K E I I C F Y
P L G G I C E L S S   R Y
  
```

#### Appearance

Lyophilized powder.

#### Formulation

Lyophilized from a 0.22 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

#### Endotoxin Level

<1 EU/µg, determined by LAL method.

#### Reconstitution

It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH<sub>2</sub>O. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.

#### Storage & Stability

Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

#### Shipping

Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

#### Background

MC4R, a receptor specific to the heptapeptide core shared by adrenocorticotrophic hormone and alpha-, beta-, and gamma-MSH, plays a pivotal role in regulating energy homeostasis and somatic growth. Mediated by G proteins that stimulate

---

adenylate cyclase to generate cAMP, this receptor forms homodimers that are disulfide-linked and can further assemble into higher-order oligomers. MC4R interacts with ATRNL1 and engages in an interaction with MGRN1, inhibiting agonist-induced cAMP production by competing with GNAS-binding. Additionally, it forms complexes with MRAP and MRAP2, enhancing ligand sensitivity and cAMP generation, thereby contributing to its multifaceted regulatory functions.

---

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA