

MC1R-VLPs Protein, Mouse (HEK293, His)

Cat. No.:	HY-P702371
Synonyms:	Melanocyte-stimulating hormone receptor; Melanocortin receptor 1; MC1-R
Species:	Mouse
Source:	HEK293
Accession:	Q01727 (M1-W315)
Gene ID:	17199
Molecular Weight:	36.6 kDa

PROPERTIES

AA Sequence	<pre> MSTQEPQKSL LGSLSNSNATS HLGLATNQSE PWCLYVSI PD GLFLSLGLVLS LVENVLVVIA ITKNRNLHSP MYYFICCLAL SDLMVSVSIV LETTII LLE AGILVARVAL VQQLDNLIDV LICGSMVSSL CFLGIIAIDR YISIFYALRY HSIVTLPRAR RAVVG IWMVS IVSSTLFITY YKHTAVLLCL VTFFLAMLAL MAI LYAHMFT RACQHAQGIA QLHKRRRSIR QGFCLKGAAT LTI LLGIFFL CWGPFFLHLL LIVLCPQHPT CSCIFKNFNL FLLLIVLSST VDPLIYAFRS QELRMTLKEV L LCSW </pre>
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 ₂ O. Solubilize for 60 minutes at room temperature with occasional gentle mixing. Avoid vigorous shaking or vortexing.
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	MC1R-VLPs, serving as a receptor for MSH (alpha, beta, and gamma) and ACTH, plays a crucial role in melanogenesis by regulating the production of eumelanin (black/brown) and pheomelanin (red/yellow) through the activation of adenylate cyclase via G proteins. The receptor interacts with MGRN1, inhibiting agonist-induced cAMP production by competing with GNAS-binding, although it does not undergo MGRN1-mediated ubiquitination. Additionally, MC1R-VLPs interacts with OPN3,
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resulting in a decrease in MC1R-mediated cAMP signaling and consequently reducing melanin production in melanocytes. These interactions highlight the intricate regulatory mechanisms governing melanogenesis mediated by MC1R-VLPs.

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

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