

## Recombinant Human MC1R

**Cat. No.** MC1R-29451TH    **Lot. No.** (See product label)

### SPECIFICATION

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <b>Product Overview</b>   | Recombinant fragment, corresponding to amino acids 1-100 of Human MC1 Receptor, with an N-terminal proprietary tag, predicted MWt 36.63 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Species</b>            | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source</b>             | Wheat Germ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>ProteinLength</b>      | 100 amino acids                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Description</b>        | <p>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.</p> |
| <b>Molecular Weight</b>   | 36.630kDa inclusive of tags                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Tissue specificity</b> | Melanocytes and corticoadrenal tissue.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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|---------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Form</b>                     | Liquid                                                                                                   |
| <b>Purity</b>                   | Proprietary Purification                                                                                 |
| <b>Storage buffer</b>           | pH: 8.00Constituents:0.3% Glutathione, 0.79% Tris HCl                                                    |
| <b>Storage</b>                  | Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.                |
| <b>Sequences of amino acids</b> | MAVQGSQRRLLGSLNSTPTAIPQLGLAANQTGARCLEVSISDGLFLSLGLVSLVENA<br>LVVATIAKNRNLHSPMYCFICCLALSDLLVSGSNVLETAVILL |
| <b>Sequence Similarities</b>    | Belongs to the G-protein coupled receptor 1 family.                                                      |

## GENE INFORMATION

|                        |                                                                                                                                |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | MC1R melanocortin 1 receptor (alpha melanocyte stimulating hormone receptor) [ Homo sapiens ]                                  |
| <b>Official Symbol</b> | MC1R                                                                                                                           |
| <b>Synonyms</b>        | MC1R; melanocortin 1 receptor (alpha melanocyte stimulating hormone receptor); melanocyte-stimulating hormone receptor; MSH R; |
| <b>Gene ID</b>         | 4157                                                                                                                           |
| <b>mRNA Refseq</b>     | NM_002386                                                                                                                      |
| <b>Protein Refseq</b>  | NP_002377                                                                                                                      |
| <b>MIM</b>             | 155555                                                                                                                         |

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| <b>Uniprot ID</b>          | Q01726                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Chromosome Location</b> | 16q24.3                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Pathway</b>             | Chaperonin-mediated protein folding, organism-specific biosystem; Class A/1 (Rhodopsin-like receptors), organism-specific biosystem; Cooperation of Prefoldin and TriC/CCTin actin and tubulin folding, organism-specific biosystem; Diurnally regulated genes with circadian orthologs, organism-specific biosystem; Formation of tubulin folding intermediates by CCT/TriC, organism-specific biosystem; |
| <b>Function</b>            | G-protein coupled peptide receptor activity; melanocortin receptor activity; melanocyte-stimulating hormone receptor activity; protein binding; receptor activity;                                                                                                                                                                                                                                         |

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