

## Recombinant Human MTNR1A

**Cat. No.** MTNR1A-30196TH    **Lot. No.** (See product label)

### SPECIFICATION

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>   | Recombinant fragment corresponding to amino acids 296-350 of Human Melatonin Receptor 1A with an N terminal proprietary tag; Predicted MWt 31.68 kDa.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Species</b>            | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Source</b>             | Wheat Germ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>ProteinLength</b>      | 55 amino acids                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>        | <p>This gene encodes one of two high affinity forms of a receptor for melatonin, the primary hormone secreted by the pineal gland. This receptor is a G-protein coupled, 7-transmembrane receptor that is responsible for melatonin effects on mammalian circadian rhythm and reproductive alterations affected by day length. The receptor is an integral membrane protein that is readily detectable and localized to two specific regions of the brain. The hypothalamic suprachiasmatic nucleus appears to be involved in circadian rhythm while the hypophyseal pars tuberalis may be responsible for the reproductive effects of melatonin.</p> |
| <b>Molecular Weight</b>   | 31.680kDa inclusive of tags                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Tissue specificity</b> | Expressed in hypophyseal pars tuberalis and hypothalamic suprachiasmatic nuclei (SCN). Hippocampus.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Form</b>               | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

|                                 |                                                                                           |
|---------------------------------|-------------------------------------------------------------------------------------------|
| <b>Purity</b>                   | Proprietary Purification                                                                  |
| <b>Storage buffer</b>           | pH: 8.00 Constituents: 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> | GLLNQNFRKEYRRIIVSLCTARVFFVDSSNDVADRVKWKPSPLMTNNNVVKVDSV                                   |
| <b>Sequence Similarities</b>    | Belongs to the G-protein coupled receptor 1 family.                                       |

## GENE INFORMATION

|                        |                                                                      |
|------------------------|----------------------------------------------------------------------|
| <b>Gene Name</b>       | MTNR1A melatonin receptor 1A [ Homo sapiens ]                        |
| <b>Official Symbol</b> | MTNR1A                                                               |
| <b>Synonyms</b>        | MTNR1A; melatonin receptor 1A; melatonin receptor type 1A; MEL 1A R; |
| <b>Gene ID</b>         | 4543                                                                 |
| <b>mRNA Refseq</b>     | NM_005958                                                            |
| <b>Protein Refseq</b>  | NP_005949                                                            |
| <b>MIM</b>             | 600665                                                               |
| <b>Uniprot ID</b>      | P48039                                                               |
| <b>Chromosome</b>      | 4q35                                                                 |

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| Location |                                                                                                                                                                                                                                                                                                      |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pathway  | Class A/1 (Rhodopsin-like receptors), organism-specific biosystem; G alpha (i) signalling events, organism-specific biosystem; GPCR downstream signaling, organism-specific biosystem; GPCR ligand binding, organism-specific biosystem; GPCRs, Class A Rhodopsin-like, organism-specific biosystem; |
| Function | melatonin receptor activity; receptor activity; signal transducer activity;                                                                                                                                                                                                                          |

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