

## Recombinant Mouse Castor1 Protein, Myc/DDK-tagged

**Cat. No.** Castor1-1970M    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Purified recombinant protein of mouse full-length cytosolic arginine sensor for mTORC1 subunit 1 (Castor1), with C-terminal MYC/DDK tag, expressed in HEK293T cells.                                                                                                                                                                                                                                                   |
| <b>Species</b>          | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Description</b>      | Functions as an intracellular arginine sensor within the amino acid-sensing branch of the TORC1 signaling pathway. As a homodimer or a heterodimer with CASTOR2, binds and inhibits the GATOR subcomplex GATOR2 and thereby mTORC1. Binding of arginine to CASTOR1 allosterically disrupts the interaction of CASTOR1-containing dimers with GATOR2 which can in turn activate mTORC1 and the TORC1 signaling pathway. |
| <b>Molecular Mass</b>   | 36.6 kDa                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Purity</b>           | > 80% as determined by SDS-PAGE and Coomassie blue staining                                                                                                                                                                                                                                                                                                                                                            |
| <b>Stability</b>        | Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.                                                                                                                                                                                                                                                                          |
| <b>Storage</b>          | Store at -80 centigrade after receiving vials.                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Concentration</b>    | >50 µg/mL as determined by microplate BCA method                                                                                                                                                                                                                                                                                                                                                                       |

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**Storage Buffer** 25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

## GENE INFORMATION

|                        |                                                                                                                                                                               |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | Castor1 cytosolic arginine sensor for mTORC1 subunit 1 [ Mus musculus (house mouse) ]                                                                                         |
| <b>Official Symbol</b> | Castor1                                                                                                                                                                       |
| <b>Synonyms</b>        | Castor1; cytosolic arginine sensor for mTORC1 subunit 1; Gat; Gatsl3; 2410008K03Rik; cytosolic arginine sensor for mTORC1 subunit 1; GATS protein-like 3; GATS-like protein 3 |
| <b>Gene ID</b>         | 71962                                                                                                                                                                         |
| <b>mRNA Refseq</b>     | NM_028022                                                                                                                                                                     |
| <b>Protein Refseq</b>  | NP_082298                                                                                                                                                                     |
| <b>UniProt ID</b>      | Q9CWQ8                                                                                                                                                                        |

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