

## Recombinant Mouse Ddrgk1 Protein, Myc/DDK-tagged

**Cat. No.** Ddrgk1-2497M    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Product Overview</b> | Purified recombinant protein of mouse full-length DDRGK domain containing 1 (Ddrgk1), with C-terminal MYC/DDK tag, expressed in HEK293T cells.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Species</b>          | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Description</b>      | <p>Substrate adapter for ufmylation, the covalent attachment of the ubiquitin-like modifier UFM1 to substrate proteins, which plays a key role in reticulophagy (also called ER-phagy). In response to endoplasmic reticulum stress, promotes recruitment of the E3 UFM1-protein ligase UFL1 to the endoplasmic reticulum membrane: in turn, UFL1 mediates ufmylation of proteins such as RPN1 and RPL26/uL24, promoting reticulophagy of endoplasmic reticulum sheets. Ufmylation-dependent reticulophagy inhibits the unfolded protein response (UPR) by regulating ERN1/IRE1-alpha stability. Ufmylation in response to endoplasmic reticulum stress is essential for processes such as hematopoiesis or inflammatory response. Required for TRIP4 ufmylation, thereby regulating nuclear receptors-mediated transcription. May play a role in NF-kappa-B-mediated transcription through regulation of the phosphorylation and the degradation of NFKBIA, the inhibitor of NF-kappa-B. Plays a role in cartilage development through SOX9, inhibiting the ubiquitin-mediated proteasomal degradation of this transcriptional regulator.</p> |
| <b>Molecular Mass</b>   | 36 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

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|                       |                                                                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <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                                                                                              |
| <b>Storage Buffer</b> | 25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.                                                                                         |

## GENE INFORMATION

|                        |                                                                                                                                                                                   |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | Ddrgk1 DDRGK domain containing 1 [ <i>Mus musculus</i> (house mouse) ]                                                                                                            |
| <b>Official Symbol</b> | Ddrgk1                                                                                                                                                                            |
| <b>Synonyms</b>        | DDRGK1; DDRGK domain containing 1; DDRGK domain-containing protein 1; UFM1-binding protein 1 containing a PCI domain; Ufbp1; AI326138; RP23-100C5.9; 1110001I20Rik; 2600009E05Rik |
| <b>Gene ID</b>         | 77006                                                                                                                                                                             |
| <b>mRNA Refseq</b>     | NM_029832                                                                                                                                                                         |
| <b>Protein Refseq</b>  | NP_084108                                                                                                                                                                         |
| <b>UniProt ID</b>      | Q80WW9                                                                                                                                                                            |

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