

## Recombinant Mouse Osteoprotegerin/TNFRSF11B Protein (His Tag)

Catalog No. PKSM041265

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

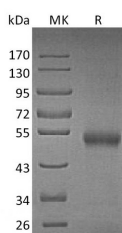
### Description

|                                    |   |
|------------------------------------|---|
| <b>Synonyms</b>                    | Tumor necrosis factor receptor superfamily member 11B;Osteoclastogenesis inhibitory factor;Osteoprotegerin;Tnfrsf11b;Ocif;Opg;TR1 |
| <b>Species</b>                     | Mouse   |
| <b>Expression Host</b>             | HEK293 Cells  |
| <b>Sequence</b>                    | Glu22-Leu401  |
| <b>Accession</b>                   | O08712  |
| <b>Calculated Molecular Weight</b> | 45.1 kDa  |
| <b>Observed molecular weight</b>   | 50-65 kDa   |
| <b>Tag</b>                         | C-His   |
| <b>Bioactivity</b>                 | Not validated for activity  |

### Properties

|                       |   |
|-----------------------|---|
| <b>Purity</b>         | > 95 % as determined by reducing SDS-PAGE.  |
| <b>Endotoxin</b>      | < 1.0 EU per µg of the protein as determined by the LAL method.   |
| <b>Storage</b>        | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.             |
| <b>Shipping</b>       | This product is provided as lyophilized powder which is shipped with ice packs.   |
| <b>Formulation</b>    | Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.<br>Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.<br>Please refer to the specific buffer information in the printed manual. |
| <b>Reconstitution</b> | Please refer to the printed manual for detailed information.  |

### Data



> 95 % as determined by reducing SDS-PAGE.

### Background

Osteoprotegerin (OPG, Tnfrsf11b) is a secreted protein that regulates bone density. OPG is widely expressed and

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constitutively released as a homodimer by mesenchymal stem cells, fibroblasts and endothelial cells. Regulation of its expression by estrogen, parathyroid hormone and cytokines is complex and changes with age. OPG acts as decoy receptor for TNFSF11/RANKL and thereby neutralizes its function in osteoclastogenesis. TRAIL decreases the release of OPG from cells that express it, while OPG inhibits TRAIL-induced apoptosis. Expression of RANK L on the cell surface, and thus its ability to stimulate osteoclastogenesis, is regulated by OPG by intracellular and extracellular mechanisms. Bone homeostasis seems to depend on the local ratio between TNFSF11 and TNFRSF11B. It may also play a role in preventing arterial calcification.