## **Recombinant Rat TNFRSF9 Protein (His Tag)**



## **RPES8530**

## **Product Information**

| Product SKU:<br>Tag:   | RPES8530<br>C-His  | Expression Host:<br>Reactivity: | Mammalia<br>Rat | n Size:<br>Accession: | 20µg<br>Q4V895 |  |
|------------------------|--------------------|---------------------------------|-----------------|-----------------------|----------------|--|
| Additional Information |                    |                                 |                 |                       |                |  |
| Calculated MW          | <b>/:</b> 18.1 kDa | Obse                            | erved MW:       | 30-40 kDa             |                |  |
| Sequence:              | Thr24-Val188       | 3                               |                 |                       |                |  |
|                        |                    |                                 |                 |                       |                |  |

## **Protein Information**

Background: CD137 (also known as 4-1BB) is a surface co-stimulatory glycoprotein originally described as present on activated T lymphocytes, which belongs to the tumor necrosis factor (TNF) receptor superfamily. It is expressed mainly on activated CD4+ and CD8+ T cells, and binds to a high-affinity ligand (4-1BBL) expressed on several antigen-presenting cells such as macrophages and activated B cells. Upon ligand binding, 4-1BB is associated with the tumor necrosis factor receptor-associated factors (TRAFs), the adaptor protein which mediates downstream signaling events including the activation of NF-kappaB and cytokine production. 4-1BB signaling either by binding to 4-1BBL or by antibody ligation delivers signals for T-cell activation and growth, as well as monocyte proliferation and B-cell survival, and plays an important role in the amplification of T cell-mediated immune responses. In addition, CD137 and CD137L are expressed in different human primary tumor tissues, suggesting that they may influence the progression of tumors. Crosslinking of CD137 on activated T cells has shown promise in enhancing anti-tumor immune responses in murine models, and agonistic anti-CD137 antibodies are currently being tested in phase I clinical trials. Soluble forms of CD137 (sCD137) are generated by differential splicing. sCD137 can bind to CD137 ligand to antagonize the costimulatory activities of the membrane-bound CD137 and reduce T cell proliferation and IL-2

| Synonyms:             | CD137, CDw137, 4-1BB, ILA, Induced By Lymphocyte Activation, T-cell antigen 4-1BB          |  |  |
|-----------------------|--|--|--|
|                       | homolog  |  |  |
| <b>Endotoxin</b> :    | < 1.0 EU/mg of the protein as determined by the LAL method                                 |  |  |
| Formulation:          | Lyophilized from a 0.2 $\mu m$ filtered solution in PBS with 5% Trehalose and 5% Mannitol. |  |  |
| Purity:               | > 90% as determined by reducing SDS-PAGE.  |  |  |
| <b>Bio-Activity</b> : | Not validated for activity   |  |  |
| Storage:              | 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 $< -20^{\circ}$ C for 3 months.                        |  |  |