### DESCRIPTION

**Source**
Mouse myeloma cell line, NS0-derived

<table>
<thead>
<tr>
<th>Source</th>
<th>Mouse TGF-β RII (Ile24 - Asp184)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Accession # Q62312</td>
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<tr>
<td></td>
<td>IEGRMDP</td>
</tr>
<tr>
<td></td>
<td>Mouse IgG2a</td>
</tr>
<tr>
<td></td>
<td>(Glu98 - Lys330)</td>
</tr>
</tbody>
</table>

**N-terminal Sequence Analysis**
Ile24

**Structure / Form**
Disulfide-linked homodimer

**Predicted Molecular Mass**
45.2 kDa (monomer)

### SPECIFICATIONS

**SDS-PAGE**
66 kDa, reducing conditions

**Activity**
Measured by its ability to inhibit TGF-β1 activity on HT-2 mouse T cells. Tsang, M. et al. (1995) Cytokine 7:389. The ED₅₀ for this effect is 3-10 ng/mL in the presence of 1 ng/mL of rhTGF-β1.

**Endotoxin Level**
<0.01 EU per 1 μg of the protein by the LAL method.

**Purity**
>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

**Formulation**
Lyophilized from a 0.2 μm filtered solution in PBS. See Certificate of Analysis for details.

### PREPARATION AND STORAGE

**Reconstitution**
Reconstitute at 100 μg/mL in sterile PBS.

**Shipping**
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage**
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

### BACKGROUND

Most cell types express three sizes of receptors for TGF-β. These are designated Type I (53 kDa), Type II (70 - 85 kDa), and Type III (250 - 350 kDa). The Type III receptor, a proteoglycan that exists in membrane-bound and soluble forms, binds TGF-β1, TGF-β2, and TGF-β3 but does not appear to be involved in signal transduction. The Type II receptor is a membrane-bound serine/threonine kinase that binds TGF-β1 and TGF-β3 with high affinity and TGF-β2 with a much lower affinity. The Type I receptor is also a membrane-bound serine/threonine kinase that apparently requires the presence of the Type II receptor to bind TGF-β. Evidence suggests that signal transduction requires the cytoplasmic domains of both the Type I and Type II receptors (1).

The recombinant soluble TGF-β Type II receptor is capable of binding TGF-β1, TGF-β3, and TGF-β5 with sufficient affinity to act as an inhibitor of these isoforms at high concentrations. The soluble receptor also binds TGF-β2, but with an affinity at least two orders of magnitude lower. Binding of TGF-β1, TGF-β3, and TGF-β5 to the soluble TGF-β Type II receptor can also be demonstrated by using the soluble receptor as a capture agent on ELISA plates and this observation has been used as the basis for the development of immunoassays for these isoforms of TGF-β.

### References: