

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human TWEAK R/TNFRSF12 in Western blots. In this format, approximately 65% cross-reactivity with recombinant mouse TWEAK R is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	recombinant human TWEAK R/TNFRSF12 extracellular domain
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
<b>Western Blot</b>	0.1 µg/mL	Recombinant Human TWEAK R/TNFRSF12 Fc Chimera (Catalog # 1199-TW)

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

The gene for TNF-related weak inducer of apoptosis receptor (TWEAK R) was originally identified as a fibroblast growth factor-inducible immediate-early response gene Fn14 in mouse NIH 3T3 fibroblasts (1, 2). Human TWEAK R cDNA encodes a 129 amino acid (aa) residue type I transmembrane protein with a 27 aa signal peptide, a 53 aa extracellular domain, a 21 aa transmembrane domain and a 28 aa cytoplasmic domain (1-3). Human and mouse TWEAK R share 82% aa sequence identity. TWEAK R is the smallest member of the TNF receptor superfamily and contains only one cysteine-rich region in its extracellular domain. The TWEAK R cytoplasmic domain contains one TRAF binding motif which binds TRAFs 1, 2, and 3. TWEAK R binds its ligand TWEAK/TNFSF12 with high affinity to initiate a signal transduction cascade that depending upon the cell type, may lead to a variety of cellular responses including cell death, cell proliferation, and angiogenesis (2-6). In newborn mice, TWEAK R is highly expressed in all tissues examined (heart, intestine, kidney, liver, lung and skin) (1). In adult mice, high TWEAK R expression levels are found in the heart and ovary, while lower expression levels are detected in the lung, kidney, skin. Elevated levels of TWEAK R mRNA were found in human or mouse hepatocellular carcinoma specimens, in regenerating mouse liver and in injured rat arteries (2, 3).

### References:

1. Meighan-Mantha, R. *et al.* (1999) J. Biol. Chem. **274**:33166.
2. Feng, S. *et al.* (2000) Am J. Pathol. **156**:1253.
3. Wiley, S. *et al.* (2001) Immunity **15**:837.
4. Schneider, P. *et al.* (1999) Eur. J. Immunol. **29**:1785.
5. Nakayama, M. *et al.* (2002) J. Immunol. **168**:734.
6. Lynch, C.N. *et al.* (1999) J. Biol. Chem. **274**:8455.