

DESCRIPTION

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| Species Reactivity | Mouse |
| Specificity | Detects mouse TWEAK R/TNFRSF12 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse (rm) EDA, rmNeogenin, recombinant human TWEAK R, rmOPG, or rmTNF R1 is observed. |
| Source | Monoclonal Rat IgG _{2A} Clone # 314636 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Immunogen | <i>E. coli</i> -derived recombinant mouse TWEAK R Glu28-Trp79 Accession # Q9CR75.1 |
| Conjugate | Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm |
| Formulation | Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

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 |
|-----------------------|----------------------------------|---|
| Flow Cytometry | 0.25-1 µg/10 ⁶ cells | MS-1 mouse pancreatic islet endothelial cell line |

PREPARATION AND STORAGE

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| Shipping | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| Stability & Storage | Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied. |

BACKGROUND

TNF-related weak inducer of apoptosis receptor (TWEAK R) belongs to the TNF receptor superfamily and is designated TNFRSF12. The gene for TWEAK R was originally identified as a fibroblast growth factor-inducible immediate-early response gene Fn14 in mouse NIH 3T3 fibroblasts (1, 2). Mouse TWEAK R cDNA encodes a 129 amino acid (aa) residues 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 by both caspase-dependent apoptosis and cathepsin B-dependent necrosis, 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.
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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.

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