Human TNF RI/TNFRSF1A Antibody
Polyclonal Goat IgG
Catalog Number: AB-225-PB

DESCRIPTION
Species Reactivity Human
Specificity Detects human TNF RI/TNFRSF1A in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) TNF RI, rhTNF-α, recombinant mouse TNF-α, recombinant rat TNF-α, and rhTNF-β is observed. Because this antibody preparation is a total IgG fraction, complete monospecificity cannot be assumed.
Source Polyclonal Goat IgG
Purification Protein A or G purified
Immunogen E. coli-derived recombinant human sTNF RI/TNFRSF1A
Endotoxin Level <0.10 EU per 1 µg of the antibody by the LAL method.
Formulation Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. 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.

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<th>Western Blot</th>
<th>1 µg/mL</th>
<th>Recombinant Human TNF RI/TNFRSF1A (Catalog # 636-R1)</th>
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Agonist Activity
Measured in a cytotoxicity assay using either L-929 mouse fibrosarcoma cells or A549 human lung carcinoma cells in the presence of the metabolic inhibitor actinomycin D.
The ED50 for this effect is typically 10-15 µg/mL for L-929 cells or 5-10 µg/mL for A549 cells.

PREPARATION AND STORAGE
Reconstitution Reconstitute at 1 mg/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.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND
TNF receptor 1 (TNF RI; also called TNF R-p55/p60 and TNFRSF1A) is a type I transmembrane protein member of the TNF receptor superfamily member, designated TNFRSF1A (1, 2). Both TNF RI and TNF RII (TNFRSF1B) are widely expressed and contain four TNF-α trimer-binding cysteine-rich domains (CRD) in their extracellular domains (ECD). However, TNF RI is thought to mediate most of the cellular effects of TNF-α (3). It is essential for proper development of lymph node germinal centers and Peyer's patches, and for combating intracellular pathogens such as Listeria (1-3). TNF RI is also a receptor for TNF-β/TNFRSF1B (lymphotoxin-α) (4). TNF RI is present on the cell surface as a trimer of 55 kDa subunits (4, 5). Exclusion from lipid rafts causes endocytosis of TNF RI complexes and induces apoptosis (1). Human TNF RI is a 455 amino acid (aa) protein that contains a 21 aa signal sequence, a 190 aa ECD with a PLAD domain (5) that mediates constitutive trimer formation, followed by the four CRD, a 23 aa transmembrane domain, and a 221 aa cytoplasmic sequence that contains a neutral sphingomyelinase activation domain and a death domain (15). The ECD of human TNF RI shows 80%, 80%, 73%, 69% and 70% aa identity with dog, cat, pig, rat and mouse TNF RI, respectively; it shows 23% aa identity with the ECD of TNFRSF1B (6, 12, 13). Exclusion from lipid rafts causes endocytosis of TNF RI complexes and induces apoptosis (1). Human TNF RI is a 455 amino acid (aa) protein that contains a 21 aa signal sequence, a 190 aa ECD with a PLAD domain (5) that mediates constitutive trimer formation, followed by the four CRD, a 23 aa transmembrane domain, and a 221 aa cytoplasmic sequence that contains a neutral sphingomyelinase activation domain and a death domain (15). The ECD of human TNF RI shows 80%, 80%, 73%, 69% and 70% aa identity with dog, cat, pig, rat and mouse TNF RI, respectively; it shows 23% aa identity with the ECD of TNFRSF1B.

References: