

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human TRAIL R1/TNFRSF10A in direct ELISAs and Western blots. In Western blots, approximately 10% cross-reactivity with recombinant human (rh) TRAIL R2 is observed and less than 1% cross-reactivity with rhTRAIL R3 and rhTRAIL R4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human TRAIL R1/TNFRSF10A Ala24-Asn239 Accession # AAC51226
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. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

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
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Neutralization	Measured by its ability to neutralize TRAIL R1/TNFRSF10A-mediated inhibition of cytotoxicity in the L-929 mouse fibroblast cell line. The Neutralization Dose (ND ₅₀) is typically 0.02-0.055 µg/mL in the presence of 10 ng/mL Recombinant Human TRAIL R1/TNFRSF10A Fc Chimera, 12 ng/mL Recombinant Human TRAIL/TNFSF10, a cross-linking antibody, Mouse polyHistidine Monoclonal Antibody, and 1 µg/mL actinomycin D.	

DATA

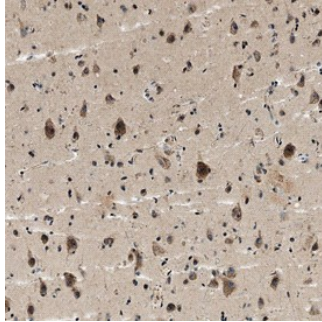
Neutralization

TRAIL R1/TNFRSF10A Inhibition of TRAIL/TNFSF10-induced Cytotoxicity and Neutralization by Human TRAIL R1/TNFRSF10A Antibody. In the presence of a cross-linking antibody, Mouse polyHistidine Monoclonal Antibody (Catalog # MAB050) and the metabolic inhibitor actinomycin D (1 µg/mL), Recombinant Human TRAIL R1/TNFRSF10A Fc Chimera (Catalog # 347-DR) inhibits Recombinant Human TRAIL/TNFSF10 (Catalog # 375-TL) induced cytotoxicity in the L-929 mouse fibroblast cell line in a dose-dependent manner (orange line), as measured by crystal violet staining. Under these conditions, inhibition of Recombinant Human TRAIL/TNFSF10 (12 ng/mL) activity elicited by Recombinant Human TRAIL R1/TNFRSF10A Fc Chimera (10 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human TRAIL R1/TNFRSF10A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF347). The ND₅₀ is typically 0.02-0.055 µg/mL.

Western Blot

Detection of Human TRAIL R1/TNFRSF10A by Western Blot. Western blot shows lysates of TF-1 human erythroleukemic cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human TRAIL R1/TNFRSF10A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF347) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for TRAIL R1/TNFRSF10A at approximately 50 kDa (as indicated). This experiment was conducted under reducing conditions.

Immunohistochemistry



TRAIL R1/TNFRSF10A in Human Brain.
TRAIL R1/TNFRSF10A was detected in immersion fixed paraffin-embedded sections of human brain using Goat Anti-Human TRAIL R1/TNFRSF10A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF347) at 10 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in neurons. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 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

Human TRAIL R1, also called DR4, is a type 1, TNF R family, membrane protein which is a receptor for TRAIL (APO2 ligand). In the TNF superfamily nomenclature, TRAIL R1 is referred to as TNFRSF10A. TRAIL R1 cDNA encodes a 468 amino acid residue precursor protein containing extracellular cysteine-rich domains, a transmembrane domain and a cytoplasmic death domain. Among the TNF receptor family proteins, TRAIL R1 is most closely related to TRAIL R2/DR5, sharing 55% amino acid sequence identity. Binding of trimeric TRAIL to TRAIL R1 induces apoptosis. The induction of apoptosis likely requires oligomerization of the receptor. The human TRAIL R1/Fc chimera neutralizes the ability of TRAIL to induce apoptosis. Besides TRAIL R1, an additional TRAIL R2/DR5, which transduces apoptosis signal, and two TRAIL decoy receptors, which antagonize TRAIL-induced apoptosis, have been reported.

References:

1. Pan, G. *et al.* (1997) *Science* **276**:111.
2. Golstein, P. (1997) *Curr. Biol.* **7**:R750.