Human TWEAK/TNFSF12 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1090

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TWEAK in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human (rh) BAFF, rhFas Ligand, rhGITR Ligand, rhOX40 Ligand, rhTRAIL and less than 1% cross-reactivity with rhAPRIL, rhLIGHT, rhTNF-α, rhVEGI, and rhTRANCE is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human TWEAK Arg93-His249 Accession # Q4ACW9
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.

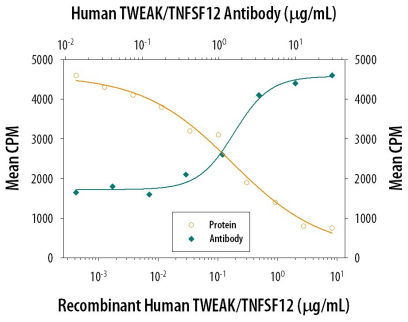
APPLICATIONS

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	0.1 µg/mL	Recombinant Human TWEAK/TNFSF12 (Catalog # 1090-TW)
Immunocytochemistry	5-15 µg/mL	See Below
Neutralization	Measured by its ability to neutralize TWEAK/TNFSF12-induced inhibition of proliferation in the HT−29 human colon adenocarcinoma cell line. Yu, K. Y. *et al.* (1999) J. Biol. Chem. **274**:13733; Harrop, J. A. *et al.* (1998) J. Biol. Chem. **273**:27548The Neutralization Dose (ND_{50}) is typically 2-8 µg/mL in the presence of 1 µg/mL Recombinant Human TWEAK/TNFSF12.	

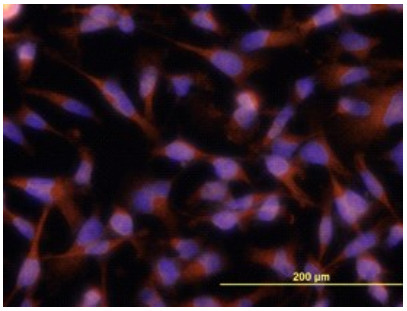
DATA

Neutralization



TWEAK/TNFSF12 Inhibition of Cell Proliferation and Neutralization by Human TWEAK/TNFSF12 Antibody. Recombinant Human TWEAK/TNFSF12 (Catalog # 1090-TW) inhibits proliferation in the the HT-29 human colon adenocarcinoma cell line in a dose-dependent manner (orange line). Activity elicited by Recombinant Human TWEAK/TNFSF12 (1 µg/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human TWEAK/TNFSF12 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1090). The ND_{50} is typically 2-8 µg/mL.

Immunocytochemistry



TWEAK/TNFSF12 in MDA-MB-231 Human Cell Line. TWEAK/TNFSF12 was detected in immersion fixed MDA-MB-231 human breast cancer cell line using 10 µg/mL Goat Anti-Human TWEAK/TNFSF12 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1090) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

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	**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.

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BACKGROUND

TWEAK is a type II transmembrane protein belonging to the TNF superfamily (1). It contains a short cytoplasmic domain (amino acids (aa) 1-18), the transmembrane domain (aa 19-42) and an extracellular domain (aa 43-249). The extracellular domains of human and murine TWEAK share 89% aa sequence identity. A soluble form of TWEAK is generated from the membrane-associated molecules by proteolytic cleavage after Arg 93 suggesting that TWEAK may have long-range effects. TWEAK is expressed widely in many tissues and cells. At least two receptors that bind TWEAK have been identified (2-4). Death Receptor 3 (DR3), also known as TNFRSF12, Apo-3, LARD, WSL-1, or TRAMP, is a TNF receptor superfamily member that is expressed predominantly in tissues with high lymphocyte content (2). It has been suggested that induction of cell death by TWEAK-DR3 interaction involves the activation of NF-κB. In cells that lack DR3, alternate pathways of TWEAK-induced cell death mediated by receptors distinct from DR3 have been suggested (5, 6). TWEAK receptor (TWEAKR, alternatively known as FN14), is a novel TNF receptor superfamily member that also binds TWEAK (3, 4). It is a mitogen-inducible gene that is expressed in fibroblasts, hepetocellular carcinomas and endothelial cells. TWEAK-TWEAKR interaction has been shown to play a role in endothelial cell growth and migration. This effect of TWEAK is not mediated by an up-regulation of VEGF (7).

References:

1. Chicheportiche, Y. *et al.* (1997) J. Biol Chem. **272**:32401.
2. Marsters, S. *et al.* (1998) Current Biol. **8**:525.
3. Wiley, S.R. *et al.* (2001) Immunity, **15**:837.
4. Feng, S-L.Y. *et al.* (2000) Am J. Path. **156**:1253.
5. Nakayama, M. *et al.* (2002) J. Immunol. **168**:734.
6. Schneider, P. *et al.* (1999) Eur. J. Immunol., **29**:1785.
7. Lynch, C. *et al.* (1998) J. Biol. Chem. **274**:8455.

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