

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TWEAK/TNFSF12 in ELISAs and Western blots. In sandwich immunoassays, less than 15% cross-reactivity with recombinant mouse TWEAK is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human TWEAK/TNFSF12 Arg93-His249 Accession # Q4ACW9
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

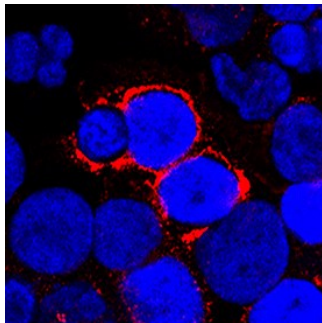
APPLICATIONS

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
Western Blot	0.1 µg/mL	Recombinant Human TWEAK/TNFSF12 (Catalog # 1090-TW)
Immunocytochemistry	5-15 µg/mL	See Below
Human TWEAK/TNFSF12 Sandwich Immunoassay		Reagent
ELISA Capture	2-8 µg/mL	Human TWEAK/TNFSF12 Antibody (Catalog # MAB1090)
ELISA Detection Standard	0.1-0.4 µg/mL	Human TWEAK/TNFSF12 Biotinylated Antibody (Catalog # BAF1090) Recombinant Human TWEAK/TNFSF12 (Catalog # 1090-TW)

DATA

Immunocytochemistry



TWEAK/TNFSF12 in human PBMCs.
TWEAK/TNFSF12 was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) using Goat Anti-Human TWEAK/TNFSF12 Biotinylated Antigen Affinity-purified Polyclonal Antibody (Catalog # BAF1090) at 15 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Streptavidin (red; Catalog # NL999) and counterstained with DAPI (blue). Specific staining was localized to plasma membrane and cytoplasm. 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.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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

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- κ B. 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, hepatocellular 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.
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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.