

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human APRIL/TNFSF13 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 1% cross-reactivity with recombinant human (rh) Fas Ligand, rhTNF- α , rhTRAIL, and rhTRANCE is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human APRIL/TNFSF13
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m 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 μ g/mL	Recombinant Human APRIL/TNFSF13 (Catalog # 884-AP)
Flow Cytometry	2.5 μ g/10 ⁶ cells	Th2-stimulated human PBMC

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. <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

APRIL (a proliferation-inducing ligand), also known as TNFSF13, TALL2, and TRDL1, is a member of the TNF ligand superfamily (1). APRIL is synthesized as a 32 kDa type II transmembrane protein which is cleaved by furin in the Golgi to release a 17 kDa soluble molecule (2, 3). Secreted APRIL consists almost entirely of a single TNF homology domain (2, 3). Little or no transmembrane APRIL is expressed on the cell surface (3). Alternate splicing generates isoforms with short deletions at the N- or C-terminus (4). Human APRIL shares 85% aa sequence identity with mouse and rat APRIL. Among TNF superfamily ligands, BAFF shows the greatest sequence homology with APRIL, and the two proteins exhibit overlapping biological activities. APRIL promotes cellular proliferation and protects from apoptosis in normal and transformed cells (3, 5-7). It is present in elevated amounts in a wide variety of cancers primarily due to expression by tumor-infiltrating neutrophils (4, 5, 7-9). Both APRIL and BAFF bind and signal through the TNF superfamily receptors TACI and BCMA, and BAFF additionally functions through BAFF R (6, 10, 11). A stretch of basic amino acids at the N-terminus of APRIL is required for its interaction with heparan sulfate proteoglycans (HSPGs) (12, 13). Binding to HSPGs is independent of APRIL's binding to TACI and BCMA (12, 13). Interaction with HSPGs serves to concentrate APRIL on the surface of cells, thereby favoring TACI- or BCMA-mediated effects (8, 9, 13). APRIL can form bioactive heterotrimers with BAFF, and these circulate in the serum of patients with rheumatic immune disorders (14). A bioactive protein known as TWE-PRIL consists of the intracellular domain, transmembrane segment, and stalk region of TWEAK fused to the TNF homology domain of APRIL (15). TWE-PRIL is expressed in monocytes and activated T cells, and in contrast to APRIL, it is presented on the cell surface (15).

References:

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