

Active Recombinant Human TNFSF13 protein, HA-tagged

Cat. No. TNFSF13-1045H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human TNFSF13(Ala105-Leu250) fused with HA(YPYDVPDYA) tag at N-terminal was expressed in HEK293.
Species	Human
Source	HEK293
ProteinLength	Ala105-Leu250
Description	APRIL (a proliferation-inducing ligand), also known as TNFSF13, TALL2, TRDL1, and CD256, is a member of the TNF ligand superfamily. It is synthesized as a 32 kDa proprotein which is cleaved by furin in the Golgi to release the active 17 kDa soluble molecule. Secreted human APRIL, which consists almost entirely of a single TNF homology domain, shares 85% amino acid sequence identity with mouse and rat APRIL. Both APRIL and its close relative BAFF bind and signal through the TNF superfamily receptors TACI and BCMA, while BAFF additionally functions through BAFF R. APRIL binds to heparan sulfate proteoglycans (HSPGs) independently of its binding to TACI and BCMA. The interaction with HSPGs induces APRIL oligomerization, and this augments TACI-, or BCMA-mediated effects. HSPGs are also critical for the tumor growth-promoting effects attributed to APRIL. APRIL can form bioactive heterotrimers with BAFF, and these circulate in the serum of patients with rheumatic immune disorders. TWE-PRIL is a bioactive hybrid protein produced by gene splicing. It consists of the intracellular domain, transmembrane segment, and stalk region of TWEAK fused to the TNF homology domain of APRIL. TWE-PRIL is

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expressed in monocytes and activated T cells and, in contrast to APRIL, is presented on the cell surface. APRIL enhances the proliferation and survival of plasma cells and also promotes T cell-dependent humoral responses. In the context of autoimmune disorders, however, APRIL can inhibit pathologic humoral responses as well as disease progression. Its expression by CD4⁺ T cells inhibits the production of Th2 cytokines and allergic inflammation. APRIL levels are elevated in the serum during coronary artery disease, and it is also elevated in many cancers primarily due to expression by tumor-infiltrating neutrophils.

Predicted N Terminal	Tyr
Form	Lyophilized from a 0.2 µm filtered solution in Tris-HCl and NaCl with BSA as a carrier protein.
Bio-activity	Measured in a cell proliferation assay using anti-IgM stimulated mouse B cells. The ED50 for this effect is typically 5-25 ng/mL in the presence of goat anti-mouse IgM.
Molecular Mass	Predicted Molecular Mass: 21.7 kDa; SDS-PAGE: 26 kDa, reducing conditions.
Endotoxin	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.

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Reconstitution	Reconstitute at 100 µg/mL in PBS containing at least 0.1% human or bovine serum albumin.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
GENE INFORMATION	
Gene Name	TNFSF13 tumor necrosis factor (ligand) superfamily, member 13 [Homo sapiens]
Official Symbol	TNFSF13
Synonyms	TNFSF13; tumor necrosis factor (ligand) superfamily, member 13; tumor necrosis factor ligand superfamily member 13; APRIL; CD256; a proliferation-inducing ligand; tumor necrosis factor-like protein ZTNF2; tumor necrosis factor-related death ligand-1; TNF- and APOL-related leukocyte expressed ligand 2; TALL2; ZTNF2; TALL-2; TRDL-1; FLJ57090; UNQ383/PRO715;
Gene ID	8741
mRNA Refseq	NM_001198622
Protein Refseq	NP_001185551
MIM	604472
UniProt ID	O75888
Chromosome Location	17p13.1

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Pathway

Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; Gene Expression, organism-specific biosystem; Intestinal immune network for IgA production, organism-specific biosystem; Intestinal immune network for IgA production, conserved biosystem; Regulation of mRNA Stability by Proteins that Bind AU-rich Elements, organism-specific biosystem; Rheumatoid arthritis, organism-specific biosystem;

Function

cytokine activity; receptor binding; tumor necrosis factor receptor binding;

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