

APRIL (N-16): sc-5737

BACKGROUND

A proliferation-inducing ligand, APRIL (also designated TNFSF13), is a type II membrane protein that shares characteristics with other members of the tumor necrosis factor (TNF) cytokine family. APRIL is expressed in high levels in transformed cell lines and in human colon, thyroid, and lymphoid tumor tissues. APRIL is critically involved in the regulation of infections, inflammation, autoimmune diseases, and tissue homeostasis. APRIL is implicated in the regulation of tumor cell growth. The C-terminal extracellular domain has a jelly roll topography and is important in ligand trimerization. The binding of the ligand to its respective receptor induces oligomerization, initiating downstream signaling events. Intrinsic to oligomerization is the formation of the receptor binding site at the junction between neighboring subunits, creating a multivalent ligand.

REFERENCES

1. Smith, C.A., et al. 1994. The TNF receptor superfamily of cellular and viral proteins: activation, costimulation, and death. *Cell* 76: 959-962.
2. Banner, D.W., et al. 1996. The crystal structure of the complex of blood coagulation factor VIIa with soluble tissue factor. *Nature* 380: 41-46.
3. Hahne, M., et al. 1998. APRIL, a new ligand of the tumor necrosis factor family, stimulates tumor cell growth. *J. Exp. Med.* 188: 1185-1190.
4. Hu, S., et al. 1999. Characterization of TNFRSF19, a novel member of the tumor necrosis factor receptor superfamily. *Genomics* 62: 103-107.
5. Khare, S.D., et al. 2000. Severe B cell hyperplasia and autoimmune disease in TALL-1 transgenic mice. *Proc. Natl. Acad. Sci. USA* 97: 3370-3375.
6. Medema, J.P., et al. 2003. The uncertain glory of APRIL. *Cell Death Differ.* 10: 1121-1125.
7. Wallweber, H.J., et al. 2004. The crystal structure of a proliferation-inducing ligand, APRIL. *J. Mol. Biol.* 343: 283-290.
8. Moreaux, J., et al. 2004. BAFF and APRIL protect myeloma cells from apoptosis induced by interleukin 6 deprivation and dexamethasone. *Blood* 103: 3148-3157.
9. Patel, D.R., et al. 2004. Engineering an APRIL-specific B cell maturation antigen. *J. Biol. Chem.* 279: 16727-16735.

CHROMOSOMAL LOCATION

Genetic locus: TNFSF13 (human) mapping to 17p13.1.

SOURCE

APRIL (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of APRIL of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-5737 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

APRIL (N-16) is recommended for detection of APRIL of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

APRIL (N-16) is also recommended for detection of APRIL in additional species, including equine and canine.

Suitable for use as control antibody for APRIL siRNA (h): sc-39822, APRIL shRNA Plasmid (h): sc-39822-SH and APRIL shRNA (h) Lentiviral Particles: sc-39822-V.

Molecular Weight of APRIL: 27 kDa.

Positive Controls: Human colon tumor extract, human thyroid tumor extract or human lymphoid tumor extract.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. He, B., et al. 2004. Lymphoma B cells evade apoptosis through the TNF family members BAFF/BLyS and APRIL. *J. Immunol.* 172: 3268-3279.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **APRIL (F-5): sc-374673** or **APRIL (H-10): sc-374674**, our highly recommended monoclonal alternatives to APRIL (N-16).