

APRIL (F-5): sc-374673



The Power to Question

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, auto-immune 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.

CHROMOSOMAL LOCATION

Genetic locus: TNFSF13/TNFSF12-TNFSF13 (human) mapping to 17p13.1.

SOURCE

APRIL (F-5) is a mouse monoclonal antibody raised against amino acids 105-164 mapping within an internal region of APRIL of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APRIL (F-5) is available conjugated to agarose (sc-374673 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374673 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374673 PE), fluorescein (sc-374673 FITC), Alexa Fluor® 488 (sc-374673 AF488), Alexa Fluor® 546 (sc-374673 AF546), Alexa Fluor® 594 (sc-374673 AF594) or Alexa Fluor® 647 (sc-374673 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374673 AF680) or Alexa Fluor® 790 (sc-374673 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

APRIL (F-5) is recommended for detection of mature APRIL of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

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.

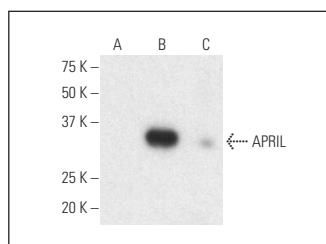
Molecular Weight of APRIL: 27 kDa.

Positive Controls: human APRIL transfected HEK293T whole cell lysate.

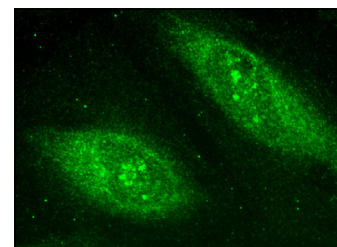
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



APRIL (F-5): sc-374673. Western blot analysis of APRIL expression in non-transfected (A) and human APRIL transfected (B) HEK293T whole cell lysates and human recombinant APRIL (C). Detection reagent used: m-IgG_{2b} BP-HRP: sc-542741.



APRIL (F-5): sc-374673. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

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 for detailed protocols and support products.

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