

# AKNA (E-14): sc-162517

## BACKGROUND

Proteins containing AT hooks bind A/T-rich DNA through a nine-amino-acid motif and are thought to co-regulate transcription by modifying the architecture of DNA, thereby enhancing the accessibility of promoters to transcription factors. AKNA (AT-hook transcription factor) is a 1,439 amino acid nuclear protein containing one A.T hook DNA-binding domain. Predominantly expressed by lymphoid tissues, AKNA is a transcription factor that specifically activates the expression of the CD40 receptor and its ligand CD40L/CD154, two cell surface molecules on lymphocytes that are critical for antigen-dependent-B-cell development. AKNA binds to A/T-rich promoters and exists as eight alternatively spliced variants. AKNA is encoded by a gene located on human chromosome 9, which consists of about 145 million bases and 4% of the human genome and encodes nearly 900 genes.

## REFERENCES

1. Lipsky, P.E., et al. 1997. Analysis of CD40-CD40 ligand interactions in the regulation of human B cell function. *Ann. N.Y. Acad. Sci.* 815: 372-383.
2. Edwalds-Gilbert, G., et al. 1997. Alternative poly(A) site selection in complex transcription units: means to an end? *Nucleic Acids Res.* 25: 2547-2561.
3. Siddiqi, A., et al. 2001. Regulation of CD40 and CD40 ligand by the AT-hook transcription factor AKNA. *Nature.* 410: 383-387.
4. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 605729. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Schubert, L.A., et al. 2002. A T cell-specific enhancer of the human CD40 ligand gene. *J. Biol. Chem.* 277: 7386-7395.
6. Bishop, G.A., et al. 2003. The CD40-CD154 interaction in B cell-T cell liaisons. *Cytokine Growth Factor Rev.* 14: 297-309.
7. Sims-Mourtada, J.C., et al. 2005. The human AKNA gene expresses multiple transcripts and protein isoforms as a result of alternative promoter usage, splicing, and polyadenylation. *DNA Cell Biol.* 24: 325-338.

## CHROMOSOMAL LOCATION

Genetic locus: AKNA (human) mapping to 9q32; Akna (mouse) mapping to 4 C1.

## SOURCE

AKNA (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of AKNA 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-162517 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## SAPPLICATIONS

AKNA (E-14) is recommended for detection of AKNA of mouse, rat and 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).

AKNA (E-14) is also recommended for detection of AKNA in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for AKNA siRNA (h): sc-92794, AKNA siRNA (m): sc-140981, AKNA shRNA Plasmid (h): sc-92794-SH, AKNA shRNA Plasmid (m): sc-140981-SH, AKNA shRNA (h) Lentiviral Particles: sc-92794-V and AKNA shRNA (m) Lentiviral Particles: sc-140981-V.

Molecular Weight of AKNA: 155 kDa.

## 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.

## TORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.