

# Act1 (C-16): sc-13112

## BACKGROUND

Members of the NF $\kappa$ B family of transcription factors are important in regulating the expression of various cellular and viral genes involved in immune and inflammatory responses, cell survival and stress responses. IL-1, TNF $\alpha$  and other related signaling pathways activate transcription factors through the activation of JNK. The NF $\kappa$ B signaling pathway converges with the signal-induced activation of JNK upstream of IKK. Isolated from the human embryonic kidney (HEK) 293 cell line, Act1 is an IKK $\gamma$ -associated protein that activates both NF $\kappa$ B and JNK constitutively. Act1, also designated NF $\kappa$ B activator 1 or CIKS (for connection to IKK and SAPK/JNK), may function as a coordinator between two stress-induced signaling pathways.

## REFERENCES

1. Siebenlist, U., et al. 1994. Structure, regulation and function of NF $\kappa$ B. *Annu. Rev. Cell. Biol.* 10: 405-455.
2. Barnes, P.J. and Karin, M. 1997. NF $\kappa$ B: a pivotal transcription factor in chronic inflammatory diseases. *N. Engl. J. Med.* 336: 1066-1071.
3. Karin, M. and Ben-Neriah, Y. 2000. Phosphorylation meets ubiquitination: the control of NF $\kappa$ B activity. *Annu. Rev. Immunol.* 18: 621-663.

## CHROMOSOMAL LOCATION

Genetic locus: TRAF3IP2 (human) mapping to 6q21.

## SOURCE

Act1 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Act1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-13112 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Act1 (C-16) is recommended for detection of Act1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Act1 (C-16) is also recommended for detection of Act1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Act1 siRNA (h): sc-29634, Act1 shRNA Plasmid (h): sc-29634-SH and Act1 shRNA (h) Lentiviral Particles: sc-29634-V.

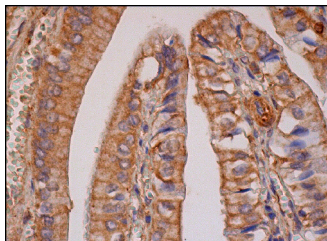
Molecular Weight of Act1: 72 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa nuclear extract: sc-2120 or Hep G2 nuclear extract: sc-364819.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz<sup>™</sup>: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



Act1 (C-16): sc-13112. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic and membrane staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Qian, Y., et al. 2007. The adaptor Act1 is required for interleukin 17-dependent signaling associated with autoimmune and inflammatory disease. *Nat. Immunol.* 8: 247-256.
2. Luo, Q., et al. 2013. A novel disease-modifying antirheumatic drug, iguratimod, ameliorates murine arthritis by blocking IL-17 signaling, distinct from methotrexate and leflunomide. *J. Immunol.* 191: 4969-4978.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **Act1 (D-11): sc-398161** or **Act1 (WW-18): sc-100647**, our highly recommended monoclonal alternatives to Act1 (C-16).