

# A20 (A-15): sc-32525

## BACKGROUND

A20 is a Cys2/Cys2 zinc finger protein that is induced by a variety of inflammatory stimuli and regulates gene expression. Specifically, A20 is induced by tumor necrosis factor (TNF) and interleukin 1 (IL-1), and acts as a negative regulator of nuclear factor  $\kappa$  B (NF $\kappa$ B) gene expression. By inhibiting NF $\kappa$ B activation, A20 plays a critical role in terminating NF $\kappa$ B responses to various stimuli. Although the C-terminal region of A20 contains seven zinc finger domains, only four of these domains are required for *in vitro* inhibition of TNF-induced NF $\kappa$ B activation. A20 also interacts with several other proteins, such as TRAF2, TRAF6 and I $\kappa$ B kinase (IKK)  $\gamma$  protein, and thereby can inhibit cell death. In addition, the novel A20-binding protein TXBP151 may mediate the anti-apoptotic activity of A20. Involved in the negative feedback regulation of signal transduction, A20 and A20-binding proteins may be useful as novel therapeutic tools in the treatment of a variety of diseases.

## REFERENCES

1. De Valck, D., Jin, D.Y., Heyninck, K., Van de Craen, M., Contreras, R., Fiers, W., Jeang, K.T. and Beyaert, R. 1999. The zinc finger protein A20 interacts with a novel anti-apoptotic protein which is cleaved by specific caspases. *Oncogene* 29: 4182-4190.
2. Beyaert, R., Heyninck, K. and Van Huffel, S. 2000. A20 and A20-binding proteins as cellular inhibitors of NF $\kappa$ B-dependent gene expression and apoptosis. *Biochem. Pharmacol.* 8: 1143-1151.
3. Van Huffel, S., Delaei, F., Heyninck, K., De Valck, D. and Beyaert, R. 2001. Identification of a novel A20-binding inhibitor of NF $\kappa$ B activation termed ABIN-2. *J. Biol. Chem.* 276: 30216-30223.
4. Lademann, U., Kallunki, T. and Jaattela, M. 2001. A20 zinc finger protein inhibits TNF-induced apoptosis and stress response early in the signaling cascades and independently of binding to TRAF2 or 14-3-3 proteins. *Cell Death Differ.* 3: 265-272.
5. Klinkenberg, M., Van Huffel, S., Heyninck, K. and Beyaert, R. 2001. Functional redundancy of the zinc fingers of A20 for inhibition of NF $\kappa$ B activation and protein-protein interactions. *FEBS Lett.* 1: 93-97.

## CHROMOSOMAL LOCATION

Genetic locus: TNFAIP3 (human) mapping to 6q23.3.

## SOURCE

A20 (A-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of A20 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-32525 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-32525 X, 200  $\mu$ g/0.1 ml.

## APPLICATIONS

A20 (A-15) is recommended for detection of A20 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 A20 siRNA (h): sc-37655, A20 shRNA Plasmid (h): sc-37655-SH and A20 shRNA (h) Lentiviral Particles: sc-37655-V.

A20 (A-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

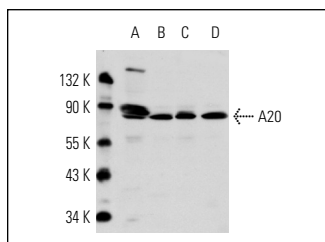
Molecular Weight of A20: 90 kDa.

Positive Controls: Daudi cell lysate: sc-2415, U-937+TNF $\alpha$  cell lysate: sc-2297 or Jurkat whole cell lysate: sc-2204.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



A20 (A-15): sc-32525. Western blot analysis of A20 expression in Daudi (A), Jurkat (B), TNF $\alpha$ -treated Jurkat (C) and TNF $\alpha$ -treated U-937 (D) whole cell lysates.

## RESEARCH USE

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



Try **A20 (A-12): sc-166692** or **A20 (B-5): sc-376564**, our highly recommended monoclonal alternatives to A20 (A-15). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **A20 (A-12): sc-166692**.