

# A20 (8E8.38): sc-32797

## 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 can thereby inhibit cell death. TXBP151, a novel A20-binding protein, 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

- 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.
- 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.
- 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.
- 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.
- 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 (8E8.38) is a mouse monoclonal antibody raised against the zinc finger domain corresponding to amino acids 375-537 of A20 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-32797 X, 200  $\mu$ g/0.1 ml.

## PROTOCOLS

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

## APPLICATIONS

A20 (8E8.38) is recommended for detection of A20 of human origin by Western Blotting (starting dilution 1:100, dilution range ) and immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)].

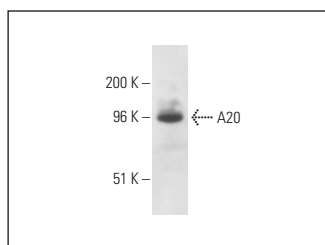
Suitable for use as control antibody for A20 siRNA (h): sc-37655, A20 shRNA Plasmid (h): sc-37655-SH and A20 shRNA (h) Lentiviral Particles: sc-37655-V.

A20 (8E8.38) 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 cell lysate: sc-2239 or Jurkat whole cell lysate: sc-2204.

## DATA



A20 (8E8.38): sc-32797. Western blot analysis of A20 expression in Jurkat whole cell lysate.

## SELECT PRODUCT CITATIONS

- Ning, S. and Pagano, J.S. 2010. The A20 deubiquitinase activity negatively regulates LMP1 activation of IRF7. *J. Virol.* 84: 6130-6138.

## 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.



See **A20 (A-12): sc-166692** for A20 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.