

# A20 (B-5): sc-376564

## 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

1. De Valck, D., et al. 1999. The zinc finger protein A20 interacts with a novel anti-apoptotic protein which is cleaved by specific caspases. *Oncogene* 18: 4182-4190.
2. Beyaert, R., et al. 2000. A20 and A20-binding proteins as cellular inhibitors of nuclear factor- $\kappa$ B-dependent gene expression and apoptosis. *Biochem. Pharmacol.* 8: 1143-1151.
3. Lademann, U., et al. 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

A20 (B-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 491-523 within an internal region of A20 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain 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-376564 X, 200  $\mu$ g/0.1 ml.

Blocking peptide available for competition studies, sc-376564 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## 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.

## APPLICATIONS

A20 (B-5) is recommended for detection of A20 of human origin by Western Blotting (starting dilution 1:100, 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 (B-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

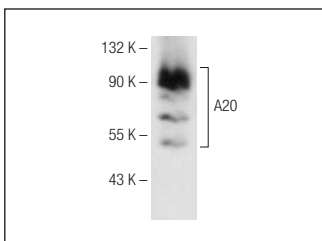
Molecular Weight of A20: 90 kDa.

Positive Controls: Daudi cell lysate: sc-2415, Jurkat whole cell lysate: sc-2204 or SUP-T1 whole cell lysate: sc-364796.

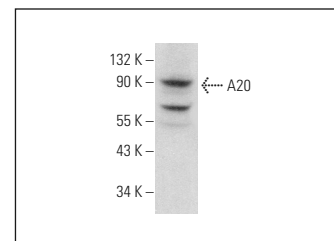
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



A20 (B-5): sc-376564. Western blot analysis of A20 expression in Jurkat whole cell lysate.



A20 (B-5): sc-376564. Western blot analysis of A20 expression in SUP-T1 whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Shao, L., et al. 2013. A20 restricts Wnt signaling in intestinal epithelial cells and suppresses colon carcinogenesis. *PLoS ONE* 8: e62223.
2. Nakamura, B.N., et al. 2018. A20 regulates canonical Wnt-signaling through an interaction with RIPK4. *PLoS ONE* 13: e0195893.



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