

A20 (R-20): sc-17856

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 κ B (NF κ B) gene expression. By inhibiting NF κ B activation, A20 plays a critical role in terminating NF κ 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 κ B activation. A20 also interacts with several other proteins, such as TRAF2, TRAF6 and I κ B kinase (IKK) γ 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* 29: 4182-4190.
2. Beyaert, R., et al. 2000. A20 and A20-binding proteins as cellular inhibitors of NF κ B-dependent gene expression and apoptosis. *Biochem. Pharmacol.* 8: 1143-1151.
3. Van Huffel, S., et al. 2001. Identification of a novel A20-binding inhibitor of NF κ B activation termed ABIN-2. *J. Biol. Chem.* 276: 30216-30223.
4. 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.
5. Klinkenberg, M., et al. 2001. Functional redundancy of the zinc fingers of A20 for inhibition of NF κ B activation and protein-protein interactions. *FEBS Lett.* 1: 93-97.

CHROMOSOMAL LOCATION

Genetic locus: TNFAIP3 (human) mapping to 6q23.3; Tnfaip3 (mouse) mapping to 10 A3.

SOURCE

A20 (R-20) 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 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17856 P, (100 μ 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-17856 X, 200 μ g/0.1 ml.

APPLICATIONS

A20 (R-20) is recommended for detection of A20 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). A20 (R-20) is also recommended for detection of A20 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for A20 siRNA (h): sc-37655, A20 siRNA (m): sc-37656, A20 shRNA Plasmid (h): sc-37655-SH, A20 shRNA Plasmid (m): sc-37656-SH, A20 shRNA (h) Lentiviral Particles: sc-37655-V and A20 shRNA (m) Lentiviral Particles: sc-37656-V.

A20 (R-20) 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 α 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) 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.

SELECT PRODUCT CITATIONS

1. Li, H.L., et al. 2007. Targeted cardiac overexpression of A20 improves left ventricular performance and reduces compensatory hypertrophy after myocardial infarction. *Circulation* 115: 1885-1894.
2. Ramsey, H.E., et al. 2009. A20 protects mice from lethal liver ischemia/reperfusion injury by increasing peroxisome proliferator-activated receptor- α expression. *Liver Transpl.* 15: 1613-1621.

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.



Try **A20 (A-12): sc-166692** or **A20 (B-5): sc-376564**, our highly recommended monoclonal alternatives to A20 (R-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **A20 (A-12): sc-166692**.