SANTA CRUZ BIOTECHNOLOGY, INC.

ISG20 (C-12): sc-514979

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Interferon-stimulated gene (ISG20) protein is a 3' to 5' exonuclease that specifically targets single-stranded RNA for degradation. Located in promyelocytic leukemia (PML) nuclear bodies, ISG20 is present in peripheral blood leukocytes, spleen, thymus, colon and lung tissues. Constitutive expression of ISG20 confers resistance to vesicular stomatitis virus (VSV), influenza virus, and encephalomyocarditis virus (EMCV). In addition to providing antiviral protection, ISG20 may mediate estrogen influence on cellular proliferation and differentiation.

REFERENCES

1. Pentecost, B.T. 1998. Expression and estrogen regulation of the HEM45 mRNA in human tumor lines and in the rat uterus. J. Steroid Biochem. Mol. Biol. 64: 25-33.
2. Nguyen, L.H., et al. 2001. The human interferon- and estrogen-regulated ISG20/HEM45 gene product degrades single-stranded RNA and DNA *in vitro*. Biochemistry 40: 7174-7179.
3. Espert, L., et al. 2003. ISG20, a new interferon-induced RNase specific for single-stranded RNA, defines an alternative antiviral pathway against RNA genomic viruses. J. Biol. Chem. 278: 16151-16158.

CHROMOSOMAL LOCATION

Genetic locus: ISG20 (human) mapping to 15q26.1; Isg20 (mouse) mapping to 7 D3.

SOURCE

ISG20 (C-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 33-49 near the N-terminus of ISG20 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-514979 X, 200 µg/0.1 ml.

ISG20 (C-12) is available conjugated to agarose (sc-514979 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514979 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514979 PE), fluorescein (sc-514979 FITC), Alexa Fluor® 488 (sc-514979 AF488), Alexa Fluor® 546 (sc-514979 AF546), Alexa Fluor® 594 (sc-514979 AF594) or Alexa Fluor® 647 (sc-514979 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514979 AF680) or Alexa Fluor® 790 (sc-514979 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514979 P, (100 µg 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.

APPLICATIONS

ISG20 (C-12) is recommended for detection of ISG20 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

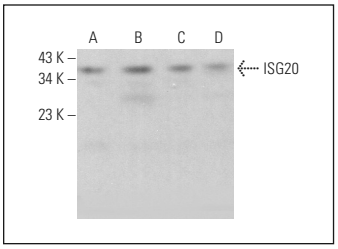
Suitable for use as control antibody for ISG20 siRNA (h): sc-45248, ISG20 siRNA (m): sc-45249, ISG20 shRNA Plasmid (h): sc-45248-SH, ISG20 shRNA Plasmid (m): sc-45249-SH, ISG20 shRNA (h) Lentiviral Particles: sc-45248-V and ISG20 shRNA (m) Lentiviral Particles: sc-45249-V.

ISG20 (C-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

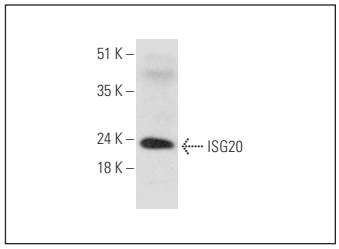
Molecular Weight of ISG20: 20 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, M1 whole cell lysate: sc-364782 or SP2/0 whole cell lysate: sc-364795.

DATA



ISG20 (C-12): sc-514979. Western blot analysis of ISG20 expression in WEHI-231 (**A**), SP2/0 (**B**), M1 (**C**) and BYDP (**D**) whole cell lysates.



ISG20 (C-12): sc-514979. Western blot analysis of ISG20 expression in Raji whole cell lysate.

SELECT PRODUCT CITATIONS

1. Park, Y.K., et al. 2020. Antiviral activity of interferon-stimulated gene 20, as a putative repressor binding to hepatitis B virus enhancer II and core promoter. J. Gastroenterol. Hepatol. 35: 1426-1436.
2. Cheng, J., et al. 2022. The regulation of ISG20 expression on SARS-CoV-2 infection in cancer patients and healthy individuals. Front. Immunol. 13: 958898.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.