

ISG20 (D-5): sc-376665

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., Espert, L., Mechti, N. and Wilson, D.M., 3rd. 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., Degols, G., Gongora, C., Blondel, D., Williams, B.R., Silverman, R.H. and Mechti, N. 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.
4. Espert, L., Rey, C., Gonzalez, L., Degols, G., Chelbi-Alix, M.K., Mechti, N. and Gongora, C. 2004. The exonuclease ISG20 is directly induced by synthetic dsRNA via NF κ B and IRF-1 activation. *Oncogene* 23: 4636-4640.
5. Espert, L., Degols, G., Lin, Y.L., Vincent, T., Benkirane, M. and Mechti, N. 2005. Interferon-induced exonuclease ISG20 exhibits an antiviral activity against human immunodeficiency virus type I. *J. Gen. Virol.* 86: 2221-2229.

CHROMOSOMAL LOCATION

Genetic locus: ISG20 (human) mapping to 15q26.1.

SOURCE

ISG20 (D-5) is a mouse monoclonal antibody raised against amino acids 101-150 mapping within an internal region of ISG20 of human origin.

PRODUCT

Each vial contains 200 μ g 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-376665 X, 200 μ g/0.1 ml.

ISG20 (D-5) is available conjugated to agarose (sc-376665 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376665 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376665 PE), fluorescein (sc-376665 FITC), Alexa Fluor[®] 488 (sc-376665 AF488), Alexa Fluor[®] 546 (sc-376665 AF546), Alexa Fluor[®] 594 (sc-376665 AF594) or Alexa Fluor[®] 647 (sc-376665 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376665 AF680) or Alexa Fluor[®] 790 (sc-376665 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ISG20 (D-5) is recommended for detection of ISG20 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 ISG20 siRNA (h): sc-45248, ISG20 shRNA Plasmid (h): sc-45248-SH and ISG20 shRNA (h) Lentiviral Particles: sc-45248-V.

ISG20 (D-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

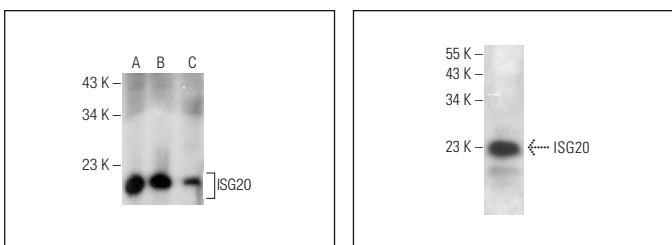
Molecular Weight of ISG20: 20 kDa.

Positive Controls: NAMALWA cell lysate: sc-2234, Raji whole cell lysate: sc-364236 or BJAB whole cell lysate: sc-2207.

RECOMMENDED SUPPORT REAGENTS

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

DATA



ISG20 (D-5): sc-376665. Western blot analysis of ISG20 expression in Raji (A), NAMALWA (B) and BJAB (C) whole cell lysates.

ISG20 (D-5): sc-376665. Western blot analysis of ISG20 expression in Daudi whole cell lysate.

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.

PROTOCOLS

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