

# ISG20 (H-50): sc-66937

## 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 $\kappa$ 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 (H-50) is a rabbit polyclonal antibody raised against amino acids 101-150 mapping within an internal region of ISG20 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG 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-66937 X, 200  $\mu$ g/0.1 ml.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

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

## APPLICATIONS

ISG20 (H-50) is recommended for detection of ISG20 of human origin by Western Blotting (starting dilution 1:200, 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).

ISG20 (H-50) is also recommended for detection of ISG20 in additional species, including porcine.

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 (H-50) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

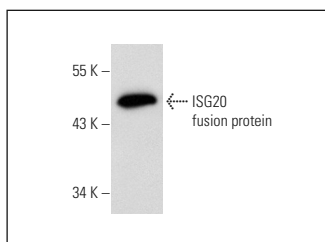
Molecular Weight of ISG20: 20 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132.

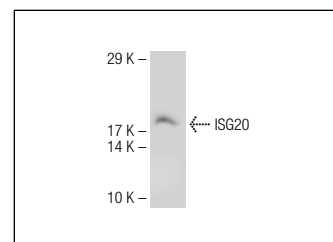
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



ISG20 (H-50): sc-66937. Western blot analysis of human recombinant ISG20 fusion protein.



ISG20 (H-50): sc-66937. Western blot analysis of ISG20 expression in Jurkat nuclear extract.

## RESEARCH USE

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



Try **ISG20 (D-5): sc-376665** or **ISG20 (C-12): sc-514979**, our highly recommended monoclonal alternatives to ISG20 (H-50).