

ISG15 (F-9): sc-166755



The Power to Question

BACKGROUND

Interferon-induced 15 kDa protein (ISG15) acts as ubiquitin by conjugating to intracellular target proteins such as JAK1 or MAPK3/ERK1 through an enzyme pathway distinct from that of ubiquitin. ISG15 shows specific chemotactic activity towards neutrophils and activates them to induce the release of eosinophil chemotactic factors. ISG15 is also involved in paracrine, autocrine and endocrine mechanisms by inducing IFN- γ secretion by monocytes and macrophages, as in cell-to-cell signaling. ISG15 is a cytoplasmic protein expressed mainly in muscle, epithelial, neuronal and lymphoid cells.

CHROMOSOMAL LOCATION

Genetic locus: ISG15 (human) mapping to 1p36.33; Isg15 (mouse) mapping to 4 E2.

SOURCE

ISG15 (F-9) is a mouse monoclonal antibody raised against amino acids 1-150 mapping at the N-terminus of ISG15 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.

ISG15 (F-9) is available conjugated to agarose (sc-166755 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166755 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166755 PE), fluorescein (sc-166755 FITC), Alexa Fluor[®] 488 (sc-166755 AF488), Alexa Fluor[®] 546 (sc-166755 AF546), Alexa Fluor[®] 594 (sc-166755 AF594) or Alexa Fluor[®] 647 (sc-166755 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166755 AF680) or Alexa Fluor[®] 790 (sc-166755 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ISG15 (F-9) is recommended for detection of ISG15 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (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 ISG15 siRNA (h): sc-43869, ISG15 shRNA Plasmid (h): sc-43869-SH and ISG15 shRNA (h) Lentiviral Particles: sc-43869-V.

Molecular Weight of ISG15: 15 kDa.

Positive Controls: HT-29 whole cell lysate: sc-364232, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

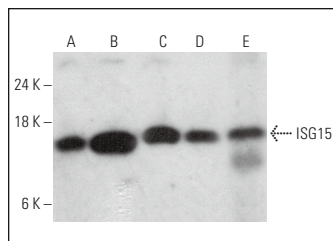
STORAGE

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

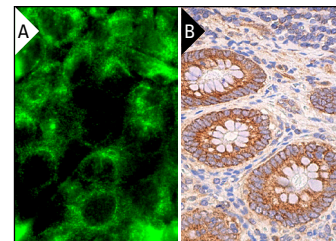
RESEARCH USE

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

DATA



ISG15 (F-9) HRP: sc-166755 HRP. Direct western blot analysis of ISG15 expression in Jurkat (A), HT-29 (B), HeLa (C) and MCF7 (D) whole cell lysates and mouse spleen tissue extract (E).



ISG15 (F-9): sc-166755. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Verweij, M.C., et al. 2015. Varicella viruses inhibit interferon-stimulated JAK-Stat signaling through multiple mechanisms. *PLoS Pathog.* 11: e1004901.
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- Sheng, W., et al. 2018. LSD1 ablation stimulates anti-tumor immunity and enables checkpoint blockade. *Cell* 174: 549-563.e19.
- Tecalco-Cruz, A.C., et al. 2019. Interplay between interferon-stimulated gene 15/ISGylation and interferon γ signaling in breast cancer cells. *Cell. Signal.* 54: 91-101.
- Adapala, N.S., et al. 2020. Inflammatory osteolysis is regulated by site-specific ISGylation of the scaffold protein NEMO. *Elife* 9: e56095.
- Song, J.Y., et al. 2021. Epigallocatechin-3-gallate can prevent type 2 human papillomavirus E7 from suppressing interferon-stimulated genes. *Int. J. Mol. Sci.* 22: 2418.
- Tecalco-Cruz, A.C., et al. 2022. Interferon-stimulated gene 15 and ISGylation are upregulated in glioblastoma. *Biochem. Biophys. Res. Commun.* 621: 144-150.
- Zhang, G., et al. 2023. CPT1A induction following epigenetic perturbation promotes MAVS palmitoylation and activation to potentiate antitumor immunity. *Mol. Cell* 83: 4370-4385.e9.
- Madaan, V., et al. 2024. ISGylation enhances dsRNA-induced interferon response and NF κ B signaling in fallopian tube epithelial cells. *J. Biol. Chem.* 300: 107686.

PROTOCOLS

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