

Stat2 (A-7): sc-1668

BACKGROUND

Membrane receptor signaling by various ligands, including interferons and growth hormones such as EGF, induces activation of JAK kinases which then leads to tyrosine phosphorylation of the various Stat transcription factors. Stat1 and Stat2 are induced by IFN- α and form a heterodimer which is part of the ISGF3 transcription factor complex. Although early reports indicate Stat3 activation by EGF and IL-6, it has been shown that Stat3 β appears to be activated by both while Stat3 α is activated by EGF, but not by IL-6. Highest expression of Stat4 is seen in testis and myeloid cells. IL-12 has been identified as an activator of Stat4. Stat5 has been shown to be activated by Prolactin and by IL-3. Stat6 is involved in IL-4 activated signaling pathways.

CHROMOSOMAL LOCATION

Genetic locus: STAT2 (human) mapping to 12q13.3.

SOURCE

Stat2 (A-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 821-851 at the C-terminus of Stat2 p113 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-1668 X, 200 μ g/0.1 ml.

Stat2 (A-7) is available conjugated to agarose (sc-1668 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-1668 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-1668 PE), fluorescein (sc-1668 FITC), Alexa Fluor[®] 488 (sc-1668 AF488), Alexa Fluor[®] 546 (sc-1668 AF546), Alexa Fluor[®] 594 (sc-1668 AF594) or Alexa Fluor[®] 647 (sc-1668 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-1668 AF680) or Alexa Fluor[®] 790 (sc-1668 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-1668 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Stat2 (A-7) is recommended for detection of Stat2 p113 of human origin by Western Blotting (starting dilution 1:200, 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 Stat2 siRNA (h): sc-29492, Stat2 shRNA Plasmid (h): sc-29492-SH and Stat2 shRNA (h) Lentiviral Particles: sc-29492-V.

Stat2 (A-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

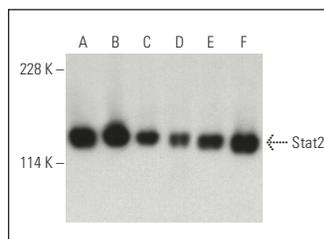
Molecular Weight of Stat2: 113 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Ramos cell lysate: sc-2216 or K-562 whole cell lysate: sc-2203.

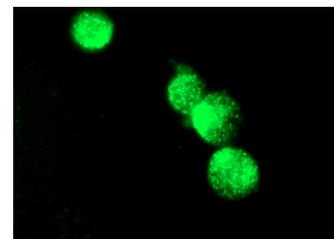
STORAGE

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

DATA



Stat2 (A-7) HRP: sc-1668 HRP. Direct western blot analysis of Stat2 expression in K-562 (A), Ramos (B), NAMALWA (C), HeLa (D), GA-10 (E) and U-87 MG (F) whole cell lysates.



Stat2 (A-7): sc-1668. Immunofluorescence staining of methanol-fixed Ramos cells showing nuclear localization.

SELECT PRODUCT CITATIONS

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- Nan, Y., et al. 2012. Induction of type I interferons by a novel porcine reproductive and respiratory syndrome virus isolate. *Virology* 432: 261-270.
- Steen, H.C., et al. 2013. Identification of Stat2 serine 287 as a novel regulatory phosphorylation site in type I interferon-induced cellular responses. *J. Biol. Chem.* 288: 747-758.
- Liu, Y., et al. 2014. Enterovirus 71 inhibits cellular type I interferon signaling by downregulating JAK1 protein expression. *Viral Immunol.* 27: 267-276.
- George, C.X. and Samuel, C.E. 2015. Stat2-dependent induction of RNA adenosine deaminase ADAR1 by type I interferon differs between mouse and human cells in the requirement for Stat1. *Virology* 485: 363-370.
- Evans, M.R., et al. 2017. An oral keratinocyte life cycle model identifies novel host genome regulation by human papillomavirus 16 relevant to HPV positive head and neck cancer. *Oncotarget* 8: 81892-81909.
- Qian, L., et al. 2018. MCP1P1 is a positive regulator of type I interferons antiviral activity. *Biochem. Biophys. Res. Commun.* 498: 891-897.
- Urin, V., et al. 2019. CRISPR/Cas9-based knockout strategy elucidates components essential for type 1 interferon signaling in human HeLa cells. *J. Mol. Biol.* 431: 3324-3338.
- Zuo, Y., et al. 2020. Regulation of the linear ubiquitination of Stat1 controls antiviral interferon signaling. *Nat. Commun.* 11: 1146.

RESEARCH USE

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

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