

Datasheet for 200-301-B65S**Stat2 Antibody****Overview**

Description:	Anti-STAT2 (MOUSE) Monoclonal Antibody - 200-301-B65S
Item No.:	200-301-B65S
Size:	25 µL
Applications:	ELISA, IHC, WB
Reactivity:	Human
Host Species:	Mouse

Product Details**Background:**

STAT2 is a member of the STAT family of transcription factors. Unlike other STATs, STAT2 is unique as it can only be activated by interferons (IFNs). STAT2 is a critical component in mediating many IFN-stimulated biological activities including antiproliferation and antiviral responses. Upon IFN treatment, STAT1 and STAT2 become tyrosine phosphorylated, assemble as heterodimers that bind IRF9 to form the ISGF3 complex. This complex translocates to the nucleus, binds to promoters of IFN-stimulated genes and mediates gene transcription. Consequently, mutations in STAT2 or loss of STAT2 expression leads to impairment in IFN signal transduction and gene activation. IFN-alpha is an approved drug for the treatment of several forms of cancer. Yet only a subset of patients who receive IFN-alpha therapy benefit from the treatment. Given that STAT2 is activated by IFNs, it is important to define if the reduced or lack of antitumor effects seen in cancer patients on IFN therapy is due to defects in STAT2 function. Our goal is to identify regions/motifs within the structural domains of STAT2 that not only are essential for the tyrosine phosphorylation of STAT2, but also regulate the antitumor effects of IFN-alpha. Collectively, the results of our studies will emphasize the physiological role of STAT2 in cancer. From a clinical viewpoint, cancer patients who may benefit the most from receiving IFN-alpha therapy can be selected based on their STAT2 function.

Synonyms:	mouse anti-STAT2 antibody, Stat 2, Signal transducer and activator of transcription 2, p113
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	19G8.H2.H6
Format:	IgG2a

Target Details

Gene Name:	Stat2
Reactivity:	Human
Immunogen Type:	Conjugated Peptide
Immunogen:	This monoclonal antibody was produced by repeated immunizations with a synthetic peptide corresponding to residues surrounding Y690 of mouse STAT2 protein.
Purity/Specificity:	This Protein-A purified antibody is directed against human STAT2 protein. A BLAST analysis was used to suggest cross-reactivity with STAT2 protein from human, rat (73%) and mouse (76%), sources based on homology with the immunizing sequence. Reactivity against homologues from other sources is not known.
Relevant Links:	• NCBI - 4885615 • UniProtKB - Q9WVL2 • GeneID - 6773

Application Details

Tested Applications:	ELISA, IHC, WB
Application Note:	This Protein-A purified antibody has been tested for use in ELISA, immunohistochemistry, and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 113 kDa in size corresponding to STAT2 protein by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:5,000 - 1:10,000
IHC:	1:2.5 µg/mL
WB:	1:1000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide

Stabilizer: None

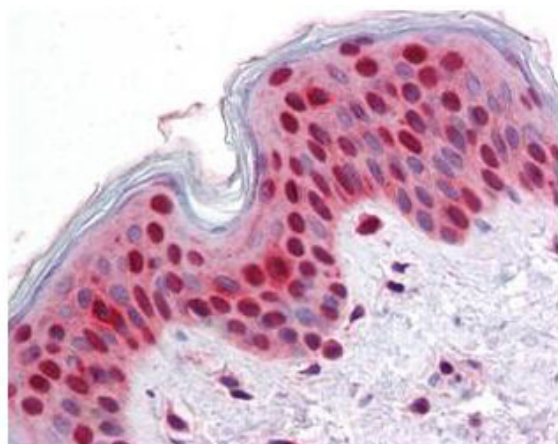
Shipping & Handling

Shipping Condition: Dry Ice

Storage Condition: Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.

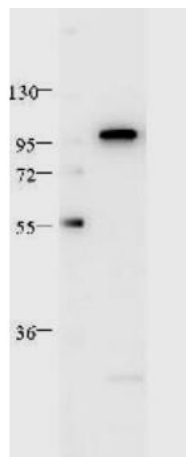
Expiration: Expiration date is three (3) months from date of receipt.

Images



Immunohistochemistry

Rockland's anti-Stat2 monoclonal antibody was used at a 2.5 µg/mL to detect Stat2 in squamous epithelium from human skin (40X) showing moderate to strong nuclear and faint to moderate cytoplasmic staining (image). Expression of Stat2 is expected to be cytoplasmic, and nuclear upon activation. The image shows the localization of the antibody as the precipitated red signal, with a hematoxylin purple nuclear counterstain. Tissue was formalin-fixed and paraffin embedded. Personal Communication, Vasiliki Demas, LifeSpan Biosciences, Seattle, WA.

**Western Blot**

HeLa whole cell lysate (p/n W09-000-364) was loaded at 1 µg. The blot was blocked with 1% BSA in TBST for 30 min at RT, then washed and incubated with Rockland's anti-Stat2 antibody in 3% BSA/TBST at 1:1,000 overnight at 4C. After washing, blot was incubated with Rockland's HRP Rb a-Ms IgG (p/n 610-4302) antibody in blocking buffer (p/n MB-070) for 30 minutes at RT. Data was collected using Bio-Rad VersaDoc® 4000 MP.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.