

Datasheet for 200-401-A43**Stat1 phospho Y701 Antibody****Overview**

Description:	Anti-STAT1 pY701 (RABBIT) Antibody - 200-401-A43
Item No.:	200-401-A43
Size:	100 µg
Applications:	ELISA, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:	This antibody is designed, produced, and validated as part of a collaboration between Rockland and the National Cancer Institute (NCI). Signal transducer and activator of transcription 1 (Stat1) belongs to a family of cytoplasmic transcription factors that can be activated (phosphorylated) by cell surface receptors IFN (interferon), cytokine KITLG/SCF and other cytokines and other growth factors. Phosphorylation of Stat1 at Tyr701 induces Stat1 dimerization, nuclear translocation and DNA binding. Following type I IFN (IFN-alpha and IFN-beta) binding to cell surface receptors, signaling via protein kinases leads to activation of Jak kinases (TYK2 and JAK1) and to tyrosine phosphorylation of STAT1 and STAT2. The phosphorylated STATs dimerize and associate with ISGF3G/IRF-9 to form a complex termed ISGF3 transcription factor, that enters the nucleus. ISGF3 binds to the IFN stimulated response element (ISRE) to activate the transcription of IFN-stimulated genes (ISG), which drive the cell in an antiviral state. In response to type II IFN (IFN-gamma), STAT1 is tyrosine- and serine-phosphorylated. It then forms a homodimer termed IFN-gamma-activated factor (GAF), migrates into the nucleus and binds to the IFN gamma activated sequence (GAS) to drive the expression of the target genes, inducing a cellular antiviral state. Anti-Stat1pY701 Antibody is useful for researchers interested in transcription factor, cytokines and growth factor, Interleukin, Interferon gamma signaling, Cancer, Immunology, and Nuclear Signaling research.
Synonyms:	rabbit anti-Stat1 pY701 Antibody, DKFZp686B04100 antibody, ISGF 3 antibody, Signal transducer and activator of transcription 1 91kDa antibody, Signal transducer and activator of transcription 1 alpha/beta antibody, Signal transducer and activator of transcription 1 antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Stat1
Reactivity:	Human
PTM Specificity:	Phosphorylation
Immunogen Type:	Conjugated Peptide
Immunogen:	This Protein A purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic phospho-peptide corresponding to residues surrounding Y701 in the mouse STAT1 protein.
Purity/Specificity:	This product was Protein A purified from monospecific antiserum. This antibody is specific for mouse Stat1 protein phosphorylated at Y701. A BLAST analysis was used to suggest cross-reactivity with Stat1 from mouse and rat based on 100% homology with the immunizing sequence. Partial reactivity is expected against Stat1 from human sources as 90% homology is noted. Cross-reactivity with Stat1 from other sources has not been determined.
Relevant Links:	• NCBI - 114326482 • UniProtKB - Q99K94 • GeneID - 20846

Application Details

Tested Applications:	ELISA, WB
Application Note:	This affinity purified antibody has been tested for use in ELISA and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 91 kDa in size corresponding to phosphorylated Stat1 protein by western blotting in the appropriate cell lysate or extract. This phospho-specific polyclonal antibody reacts with mouse Stat1 pY701 and shows minimal reactivity by ELISA against the non-phosphorylated form of the immunizing peptide.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:25,000
WB:	1:500 - 1:2,000

Formulation

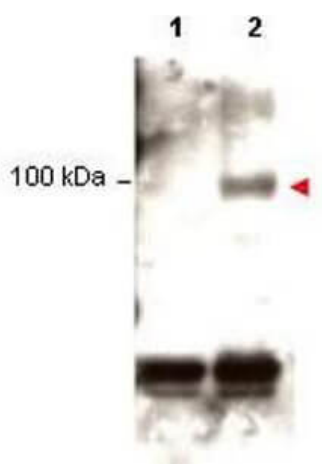
Physical State:	Liquid (sterile filtered)
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Concentration:	2.3 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot

Western blot using Rockland's Protein A purified anti-Stat1 pY701 antibody shows detection of phosphorylated Stat1 (indicated by arrowhead at ~91 kDa) in K562 cells after 30 min treatment with 1Ku of IFN- α (lane 2). No reactivity is seen for non-phosphorylated Stat1 in untreated cells (lane 1). The membrane was probed with the primary antibody at a 1:1,000 dilution at 4° C, overnight. Personal Communication from Ana Gamero, CCR-NCI, Bethesda, MD.

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.