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Anti-STAT1 pY701 (RABBIT) Antibody

Stat1 phospho Y701 Antibody
Catalog # ASR4417

Specification

Anti-STAT1 pY701 (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Mouse**
Reactivity	**Human**
Clonality	**Polyclonal**
Application	**WB, E, I, LCI**
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.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**This Protein A purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to residues surrounding Y701 in the mouse STAT1 protein.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-STAT1 pY701 (RABBIT) Antibody - Additional Information

Other Names
20846

Purity
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.

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.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

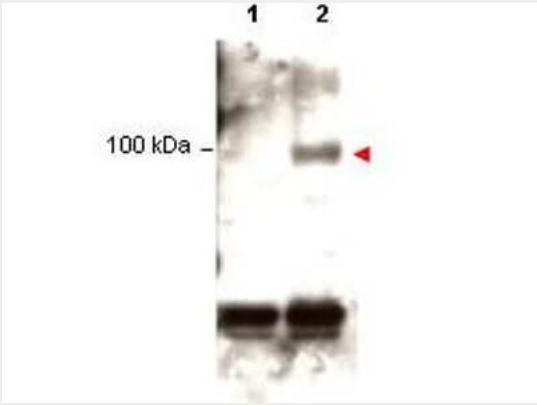
Anti-STAT1 pY701 (RABBIT) Antibody - Protein Information

Anti-STAT1 pY701 (RABBIT) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-STAT1 pY701 (RABBIT) Antibody - Images



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.

Anti-STAT1 pY701 (RABBIT) Antibody - 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.