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Anti-STAT2 pS734 (RABBIT) Antibody
STAT2 phospho S734 Antibody
Catalog # ASR5608

Specification

Anti-STAT2 pS734 (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human, Monkey**
Clonality	**Polyclonal**
Application	**WB, E, I, LCI**
Application Note	**Anti-STAT2 pS734 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 97.9 kDa in size corresponding to STAT2pS734 protein by western blotting in the appropriate cell lysate or extract.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**STAT2 pS734 antibody was prepared from whole rabbit serum produced by repeated immunizations with a phosphorylated synthetic peptide corresponding to serine 734 a region near the C-terminus of human STAT2 protein.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-STAT2 pS734 (RABBIT) Antibody - Additional Information

Gene ID 6773

Other Names
6773

Purity
STAT2 pS734 affinity purified antibody is directed against human STAT2 protein. The product was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody is specific for phosphorylated S734 human STAT2. A BLAST analysis was used to suggest cross-reactivity with STAT2 pS734 protein from human and monkey sources based on homology with the immunizing sequence. Reactivity against homologues from other sources is not known.

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-STAT2 pS734 (RABBIT) Antibody - Protein Information

Name STAT2

Function
Signal transducer and activator of transcription that mediates signaling by type I interferons (IFN-alpha and IFN-beta). Following type I IFN binding to cell surface receptors, Jak kinases (TYK2 and JAK1) are activated, leading to tyrosine phosphorylation of STAT1 and STAT2. The phosphorylated STATs dimerize, associate with IRF9/ISGF3G 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 interferon stimulated genes, which drive the cell in an antiviral state (PubMed:23391734, PubMed:9020188). In addition, also has a negative feedback regulatory role in the type I interferon signaling by recruiting USP18 to the type I IFN receptor subunit IFNAR2 thereby mitigating the response to type I IFNs (PubMed:28165510). Acts as a regulator of mitochondrial fission by modulating the phosphorylation of DNM1L at 'Ser-616' and 'Ser-637' which activate and inactivate the GTPase activity of DNM1L respectively (PubMed:23391734, PubMed:26122121, PubMed:9020188).

Cellular Location
Cytoplasm. Nucleus Note=Translocated into the nucleus upon activation by IFN-alpha/beta

Anti-STAT2 pS734 (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-STAT2 pS734 (RABBIT) Antibody - Images

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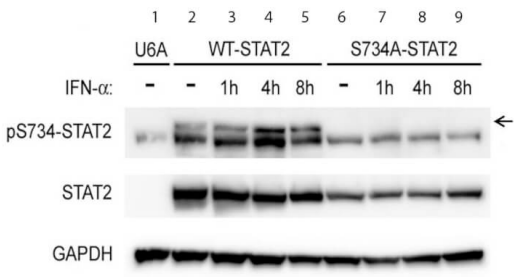

Western Blot of Rabbit anti-STAT2pS734 antibody. Lane 1: U6A cells (STAT2 deficient) untreated. Lane 2: U6A cells reconstituted with STAT2 untreated. Lane 3: U6A cells, STAT2 treated with IFNα (1h). Lane 4: U6A cells, STAT2 + IFNα (4h). Lane 5: U6A cells, STAT2 + IFNα (8h). Lane 6: U6A cells reconstituted with S734A-STAT2 mutant untreated. Lane 7: U6A cells, S734A-STAT2 treated with IFNα (1h). Lane 8: U6A cells, S734A-STAT2 + IFNα (4h). Lane 9: U6A cells, S734A-STAT2 + IFNα (8h). Load: 20 µg per lane. Primary antibody: STAT2 pS734 antibody at 1:1000 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 97.9 kDa, ~110 kDa for STAT2pS734. Other band(s): Non specific 100kDa, STAT2, GAPDH loading control.

Anti-STAT2 pS734 (RABBIT) Antibody - 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 in defects in STAT2 function. STAT2 pS734 antibody is ideal for researchers focused in cancer and transcription factor research.