Phospho-STAT3(Y705) Antibody
Peptide Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3261a

Specification

Phospho-STAT3(Y705) Antibody - Product Information

<table>
<thead>
<tr>
<th>Application</th>
<th>WB, E</th>
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<tbody>
<tr>
<td>Primary Accession</td>
<td>P40763</td>
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<tr>
<td>Other Accession</td>
<td>P52631, Q19550, P42227, P61635</td>
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<td>Reactivity</td>
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<td>Predicted</td>
<td>Bovine, Mouse, Pig, Rat</td>
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<td>Host</td>
<td>Rabbit</td>
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<tr>
<td>Clonality</td>
<td>Polyclonal</td>
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<tr>
<td>Isotype</td>
<td>Rabbit Ig</td>
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</tbody>
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Phospho-STAT3(Y705) Antibody - Additional Information

Gene ID 6774

Other Names
Signal transducer and activator of transcription 3, Acute-phase response factor, STAT3, APRF

Target/Specificity
This STAT3 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding Y705 of human STAT3.

Dilution
WB ~ 1:500

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Phospho-STAT3(Y705) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-STAT3(Y705) Antibody - Protein Information

Western blot analysis of extracts from Jurkat and Hela cells, untreated or treated with IFN-α(100ng/ml), using Phospho-STAT3-pY705 Antibody.

Phospho-STAT3(Y705) Antibody - Background

STAT3 is a member of the STAT protein family. In response to cytokines and growth factors, STAT family members are phosphorylated by the receptor associated kinases, and then form homo- or heterodimers that translocate to the cell nucleus where they act as transcription activators. This protein is activated through phosphorylation in response to various cytokines and growth factors including IFNs, EGF, IL5, IL6, HGF, LIF and BMP2. This protein mediates the expression of a variety of genes in response to cell stimuli, and thus plays a key role in many cellular processes such as cell growth and apoptosis. The small GTPase Rac1 has been shown to bind and regulate the activity of this protein. PIAS3 protein is a specific inhibitor of this protein.

Phospho-STAT3(Y705) Antibody - References

Name STAT3 (HGNC:11364)

Function
Signal transducer and transcription activator that mediates cellular responses to interleukins, KITLG/SCF, LEP and other growth factors. Once activated, recruits coactivators, such as NCOA1 or MED1, to the promoter region of the target gene (PubMed:<a href="http://www.uniprot.org/citations/17344214" target="_blank">17344214</a>). May mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4. Binds to the interleukin-6 (IL-6)-responsive elements identified in the promoters of various acute-phase protein genes. Activated by IL31 through IL31RA. Involved in cell cycle regulation by inducing the expression of key genes for the progression from G1 to S phase, such as CCND1 (PubMed:<a href="http://www.uniprot.org/citations/17344214" target="_blank">17344214</a>). Mediates the effects of LEP on melanocortin production, body energy homeostasis and lactation (By similarity). May play an apoptotic role by transactivating BIRC5 expression under LEP activation (PubMed:<a href="http://www.uniprot.org/citations/18242580" target="_blank">18242580</a>). Cytoplasmic STAT3 represses macroautophagy by inhibiting EIF2AK2/PKR activity.

Cellular Location
Cytoplasm. Nucleus. Note=Shuttles between the nucleus and the cytoplasm. Translocated into the nucleus upon tyrosine phosphorylation and dimerization, in response to signaling by activated FGFR1, FGFR2, FGFR3 or FGFR4. Constitutive nuclear presence is independent of tyrosine phosphorylation. Predominantly present in the cytoplasm without stimuli. Upon leukemia inhibitory factor (LIF) stimulation, accumulates in the nucleus. The complex composed of BART and ARL2 plays an important role in the nuclear translocation and retention of STAT3 Identified in a complex with LYN and PAG1

Tissue Location
Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas

Phospho-STAT3(Y705) 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 Cytometry
- Cell Culture
SOCS3 overexpression inhibits advanced glycation end product-induced EMT in proximal tubule epithelial cells.
Evodiamine Induces Apoptosis and Inhibits Migration of HCT-116 Human Colorectal Cancer Cells.
Reg3g Promotes Pancreatic Carcinogenesis in a Murine Model of Chronic Pancreatitis.
Expression of signal transducer and activator of transcription 3 and its phosphorylated form is significantly upregulated in patients with papillary thyroid cancer.
Effect of suppressor of cytokine signaling on hepcidin production in hepatitis C virus replicon cells.
Cooperation between integrin alpha5 and tetraspan TM4SF5 regulates VEGF-mediated angiogenic activity.