

Datasheet for ABIN968833

anti-STAT3 antibody (pTyr705)[Go to Product page](#)**1** Image**3** Publications

Overview

Quantity:	50 µg
Target:	STAT3
Binding Specificity:	pTyr705
Reactivity:	Human, Mouse
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This STAT3 antibody is un-conjugated
Application:	Western Blotting (WB), Intracellular Staining (ICS)

Product Details

Immunogen:	Phosphorylated Human Stat3 Peptide
Clone:	4-P
Isotype:	IgG2a kappa
Cross-Reactivity:	Mouse (Murine)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity

Product Details

chromatography.

Target Details

Target:	STAT3
Alternative Name:	Stat3 (STAT3 Products)
Background:	Stat (Signal transducer and activators of transcription) proteins are critical mediators of the biologic activity of cytokines, including interleukins, interferons, erythropoietin, and growth factors. Ligand-receptor interaction leads to activation of constitutively associated JAK family kinases and subsequent recruitment/activation of Stat proteins by tyrosine phosphorylation. Active Stat proteins then move to the nucleus to promote transcription of cytokine-inducible genes. Seven Stat proteins have been cloned, each of which is differentially expressed and/or activated in a cytokine-specific and cell type-specific manner. Stat3 is a 92-kDa protein that is activated as a DNA- binding protein through cytokines, such as IL-6, and growth factors, such as EGF. Stat3 activation occurs via tyrosine phosphorylation at Y705. Tyrosine phosphorylation in response to cytokine stimulation is generally mediated by JAK1. Upon activation, Stat3 dimerizes, translocates to the nucleus and binds DNA response elements, thereby regulating gene expression. It has been reported that Stat3 binds to DNA as a homodimer, but it is also capable of binding as a heterodimer with Stat1. In addition to tyrosine phosphorylation, Stat3 is also phosphorylated at S727 via the MAPK pathway. Stat3 is widely expressed and can bind to the sis-inducible element (SIE) site from the c-fos promoter. This site is similar to the GAS element that is present in IFN-gamma induced genes. Thus, phosphorylation of Y705 in Stat3 occurs in response to growth factors and cytokines, and is essential for normal transcription activity. The 4/P-STAT3 monoclonal antibody recognizes the phosphorylated Y705 of Stat3.

Molecular Weight:	92 kDa
Pathways:	JAK-STAT Signaling , RTK Signaling , Interferon-gamma Pathway , Neurotrophin Signaling Pathway , Dopaminergic Neurogenesis , Response to Growth Hormone Stimulus , Carbohydrate Homeostasis , Stem Cell Maintenance , Hepatitis C , Protein targeting to Nucleus , Feeding Behaviour , CXCR4-mediated Signaling Events , Signaling of Hepatocyte Growth Factor Receptor

Application Details

Comment:	Related Products: ABIN968533 , ABIN968534 , ABIN967389 , ABIN967808
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20° C.

Publications

Product cited in:

Kanai, Konda, Nakajima, Izumi, Kanda, Nanakin, Kubohara, Chiba: "Differentiation-inducing factor-1 (DIF-1) inhibits STAT3 activity involved in gastric cancer cell proliferation via MEK-ERK-dependent pathway." in: **Oncogene**, Vol. 22, Issue 4, pp. 548-54, (2003) ([PubMed](#)).

Smith, Crompton: "Expression of v-src in mammary epithelial cells induces transcription via STAT3." in: **The Biochemical journal**, Vol. 331 (Pt 2), pp. 381-5, (1998) ([PubMed](#)).

Fu, Zhang: "Transcription factor p91 interacts with the epidermal growth factor receptor and mediates activation of the c-fos gene promoter." in: **Cell**, Vol. 74, Issue 6, pp. 1135-45, (1993) ([PubMed](#)).

Images



Western Blotting

Image 1. Western blot analysis for Stat3 (pY705). A431 cells (Human epithelial carcinoma, ATCC CRL-1555) were either left untreated (lane 1) or treated with 100 ng/ml EGF for 5 minutes at 37°C (lane 2). The top panel was probed with a mouse anti-Stat3 antibody measuring for total Stat3 (ABIN967808) while the bottom panel was probed with a 1:500 dilution of the mouse anti-Stat3 (pY705) antibody.