

Datasheet for ABIN968869

anti-STAT3 antibody (pSer727)

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Overview

Quantity:	150 µg
Target:	STAT3
Binding Specificity:	pSer727
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This STAT3 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF)

Product Details

Immunogen:	Phosphorylated Human Stat3
Clone:	49-p
Isotype:	IgG1
Cross-Reactivity:	Mouse (Murine), Rat (Rattus)
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:	The Stat proteins function both as cytoplasmic signal transducers and as activators of transcription. Seven mammalian Stat proteins have been identified: Stat1-4, Stat5a, 5b, and Stat6. 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 is phosphorylated at serine 727 (S727) via the MAPK pathway. The S727 residue is located at a conserved Pro-X-Ser-Pro sequence, which is recognized by the protein kinase ERK. Activation through the S727 residue is thought to lead to initiation of transcription. Upon activation, Stat3 dimerizes, translocates to the nucleus, and binds DNA response elements thereby regulating gene expression. It appears that Stat3 binds to DNA as a homodimer, but it is also capable of binding as a heterodimer with Stat1. In addition to serine phosphorylation, Stat3 is also phosphorylated at tyrosine 705 by JAK1 in response to cytokine stimulation. 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-g-induced genes. Thus, phosphorylation of S727 in Stat3 occurs in response to growth factors and cytokines, and is essential for normal transcription activity. The 49/p-Stat3 monoclonal antibody recognizes the S727-phosphorylated form of Stat3 (isoform 1). The fluorochrome-conjugated formats have been evaluated using a human model system. However, the unconjugated form of this antibody (ABIN968868 or ABIN968869) is also effective for western blot analysis of human, mouse, and rat tissue.

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

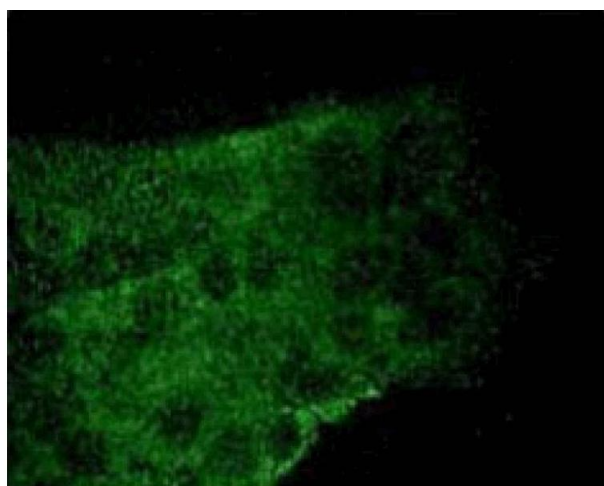
Restrictions:	For Research Use only
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Handling

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.

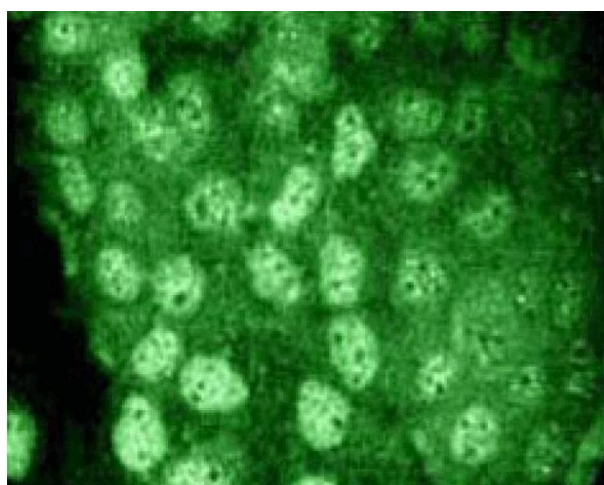
Publications

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). Schuringa, Dekker, Vellenga, Kruijer: "Sequential activation of Rac-1, SEK-1/MKK-4, and protein kinase Cdelta is required for interleukin-6-induced STAT3 Ser-727 phosphorylation and transactivation." in: The Journal of biological chemistry, Vol. 276, Issue 29, pp. 27709-15, (2001) (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).
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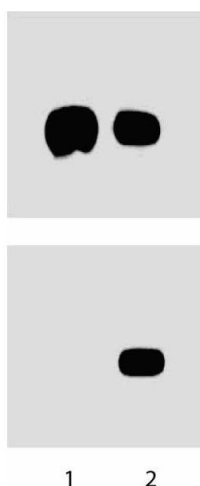
Immunofluorescence

Image 1. A431 cells were serum starved and treated with EGF (100 ng/ml) for 5 minutes, then fixed in 1:1 methanol-acetone for 10 minutes at -20°C. Immunofluorescent staining was performed using Stat3 (pS727) (ABIN968868).



Immunofluorescence

Image 2. A431 cells were serum starved and treated with EGF (100 ng/ml) for 5 minutes, then fixed in 1:1 methanol-acetone for 10 minutes at -20°C. Immunofluorescent staining was performed using Stat3 (pS727) (ABIN968868).



Western Blotting

Image 3. A431 cells were either left untreated (left lane) or treated (right lane) with 100 ng/ml EGF for 5 minutes at 37°C. The top panel was probed with Stat3 (ABIN967808) and the bottom was probed with Stat3 (pS727) (ABIN968868). Lane 1: 1:250, lane 2: 1:500 dilution of the mouse anti-Stat3 antibody.

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN968869.