

Datasheet for ABIN1177198

anti-STAT3 antibody (pTyr705) (Pacific Blue)



[Go to Product page](#)

1 Image

1 Publication

Overview

Quantity:	50 tests
Target:	STAT3
Binding Specificity:	pTyr705
Reactivity:	Human, Mouse, Cow, Chimpanzee
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This STAT3 antibody is conjugated to Pacific Blue
Application:	Intracellular Staining (ICS)

Product Details

Brand:	BD Phosflow™
Immunogen:	Phosphorylated Human Stat3 Peptide
Clone:	4-P
Isotype:	IgG2a kappa
Purification:	Purified from tissue culture supernatant or ascites by affinity chromatography

Target Details

Target:	STAT3
Alternative Name:	Stat3 (STAT3 Products)
Background:	Stat (Signal transducer and activators of transcription) proteins are critical mediators of the

Target Details

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.

Synonyms: Acute-phase response factor, APRF

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

Application Notes: This antibody conjugate is suitable for intracellular staining of human whole blood (using BD™ Phosflow Lyse/Fix Buffer) and peripheral blood mononuclear cells and cell lines (using BD Cytotfix™ Fixation Buffer).

Sample Volume: 20 µL

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09 % sodium azide.

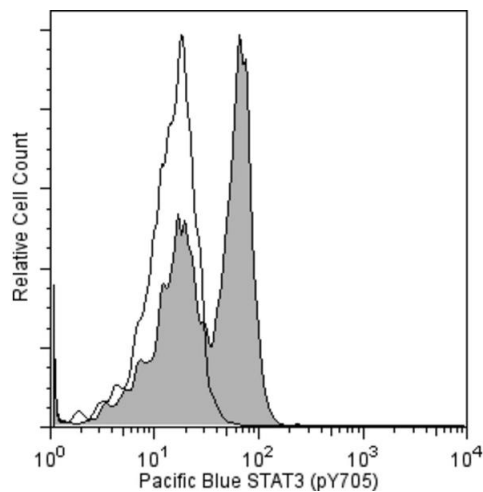
Handling

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:	4 °C
Storage Comment:	Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze. The antibody is conjugated to Pacific Blue™ under optimum conditions, and unreacted Pacific Blue™ was removed.

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).
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Images



Flow Cytometry

Image 1.