

Datasheet for ABIN1177201

**anti-STAT3 antibody (pTyr705) (Alexa Fluor 488)**[Go to Product page](#)**1** Image**1** Publication

## Overview

|                      |                                                      |
|----------------------|------------------------------------------------------|
| Quantity:            | 50 tests                                             |
| Target:              | STAT3                                                |
| Binding Specificity: | pTyr705                                              |
| Reactivity:          | Human, Mouse                                         |
| Host:                | Mouse                                                |
| Clonality:           | Monoclonal                                           |
| Conjugate:           | This STAT3 antibody is conjugated to Alexa Fluor 488 |
| Application:         | Intracellular Staining (ICS)                         |

## Product Details

|               |                                                                                                             |
|---------------|-------------------------------------------------------------------------------------------------------------|
| Brand:        | BD Phosflow™                                                                                                |
| Immunogen:    | Phosphorylated Human Stat3 Peptide                                                                          |
| Clone:        | 4-P                                                                                                         |
| Isotype:      | IgG2a kappa                                                                                                 |
| Purification: | The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. |

## Target Details

|                   |                                          |
|-------------------|------------------------------------------|
| Target:           | STAT3                                    |
| Alternative Name: | Stat3 ( <a href="#">STAT3 Products</a> ) |

## Target Details

**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.

**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

**Sample Volume:** 20 µL

**Restrictions:** For Research Use only

## Handling

**Format:** Liquid

**Buffer:** Aqueous buffered solution containing BSA 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.

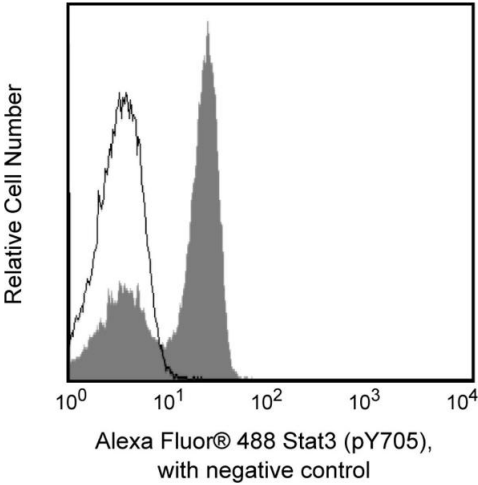
Handling

|                  |                                                                                                                                                                                                             |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Storage:         | 4 °C                                                                                                                                                                                                        |
| Storage Comment: | Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze. The antibody was conjugated to Alexa Fluor® 488 under optimum conditions, and unreacted Alexa Fluor® 488 was removed. |

Publications

|                   |                                                                                                                                                                                |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product cited in: | Liu, Gaffen, Goldsmith: "JAK/STAT signaling by cytokine receptors." in: <b>Current opinion in immunology</b> , Vol. 10, Issue 3, pp. 271-8, (1998) ( <a href="#">PubMed</a> ). |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Images



Flow Cytometry

Image 1.