

# Mouse anti STAT3 Monoclonal Antibody

Alternative Name(s): Signal transducer and activator of transcription 3 (STAT3)

### **Order Information**

Description: STAT3
Catalogue: 606-290
Lot: See label
Size: 100ug/200ul
Host: Mouse
Clone: 159.0

• Application: IHC(P), WB • Reactivity: Hu, Ms, Rt

### **ANTIGEN PREPARATION**

A synthetic peptide of STAT3

### **BACKGROUND**

Signal transducer and activator of transcription 3 (STAT3) is a member of the STAT protein family. STAT3 is a critical transcription factor activated downstream of cytokine signaling and is integral for the function of multiple immune cell types. 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. STAT3 regulates cytokine-mediated generation of inflammatory helper T cells. This gene also plays a role in regulating host response to viral and bacterial infections. Human mutations in STAT3 cause primary immunodeficiency resulting in impaired control of a variety of infections, including reactivation of latent viruses. Mutations in this gene are associated with infantile-onset multisystem autoimmune disease and hyperimmunoglobulin E syndrome.

### **PURIFICATION**

The mouse IgG is purified by Protein A-Affinity Chromatography according to Isotyping

# **FORMULATION**

This affinity purified antibody is supplied in sterile Phosphatebuffered saline (pH7.2) containing antibody stabilizer

### **SPECIFICITY**

This antibody recognizes human STAT3 protein. It cross reacts with human, mice and rat.

### STORAGE

The antibodies are stable for 24 months from date of receipt when stored at -20oC to -70oC. The antibodies can be stored at 2oC-8oC for three month without detectable loss of activity. Avoid repeated freezing-thawing cycles.

## **APPLICATIONS/SUGGESTED WORKING DILUTIONS\***

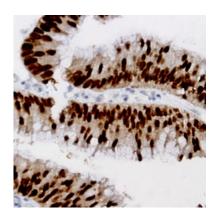
- Western Blot: 0.1-1 µg/ml
- ELISA: 0.01-0.1 μg/ml
- Immunoprecipitation: 2-5 µg/ml
- IHC: 2-10 µg/ml
- · Flow cytometry: Not tested
- Molecular Weight: 83-88
- · Positive Control: Kidney Tissue



• Cellular Location: Cell Membrane

\*Optimal dilutions should be determined by researchers for the specific applications.





Immunohistochemistry: Human colon carcinoma (FFPE) stained with Mouse anti-STAT3 (Cat# 606-290) at 1:200 for 10 min @ RT. Staining of formalin-fixed tissue requires boiling tissue sections in 10 mM Citrate Buffer, pH 6.0 for 10 min followed by cooling at RT for 20 min

## **REFERENCES**