

Product name:	STAT3(3F4)Mouse Monoclonal Antibody
Cat number:	MABN18356
Conjugate:	Unconjugated
Size:	100 ul
Clone:	3F4
Concentration:	1mg/ml
Host:	Mouse
Isotype:	IgG
Immunogen:	Recombinant Protein of STAT3
Reactivity:	Human,Rat,Mouse
Applications:	WB 1:1000-1:2000,IHC 1:100-1:200,ICC/IF 1:50-1:200
Molecular Weight:	86kDa
Purification:	Affinity purification
Form:	liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Background:

The protein encoded by this gene is a member of the STAT protein family. 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. Mutations in this gene are associated with infantile-onset multisystem autoimmune disease and hyperdisease: Defects in STAT3 are the cause of hyperimmunoglobulin E recurrent infection syndrome autosomal dominant (AD-HIES) [MIM:147060]; also known as hyper-IgE syndrome or Job syndrome. AD-HIES is a rare disorder of immunity and connective tissue characterized by immunodeficiency, chronic eczema, recurrent Staphylococcal infections, increased serum IgE, eosinophilia, distinctive coarse facial appearance, abnormal dentition, hyperextensibility of the joints, and bone fractures.

function: Transcription factor that binds to the interleukin-6 (IL-6)-responsive elements identified in the promoters of various acute-phase protein genes. Activated by IL31 through IL31RA.

miscellaneous: Involved in the gp130-mediated signaling pathway.

online information: STAT3 entry, online information: STAT3 mutation db, PTM: Tyrosine phosphorylated in response to IL-6, IL-11, CNTF, LIF, CSF-1, EGF, PDGF, IFN-alpha and OSM. Phosphorylated on serine upon DNA damage, probably by ATM or ATR. Serine phosphorylation is important for the formation of stable DNA-binding STAT3 homodimers and maximal transcriptional activity.

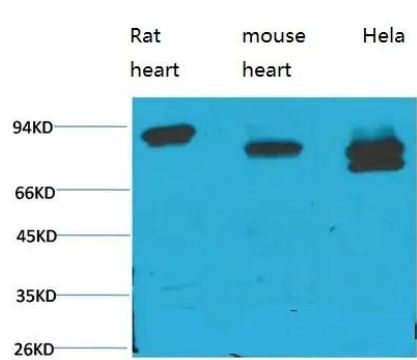
similarity: Belongs to the transcription factor STAT family.

similarity: Contains 1 SH2 domain.

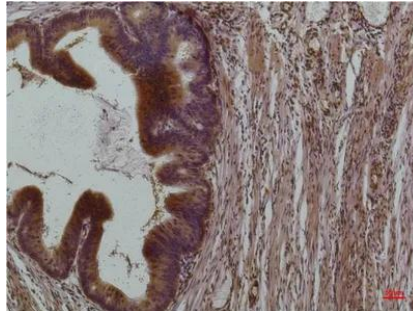
subcellular location: Shuttles between the nucleus and the cytoplasm. Constitutive nuclear presence is independent of tyrosine phosphorylation.

subunit: Forms a homodimer or a heterodimer with a related family member (at least STAT1). Interacts with NCOA1, PELP1, SOCS7 and STATIP1. Interacts with HCV core protein. Interacts with IL23R in presence of IL23. Interacts with IL31RA. Interacts with SIPAR. Interacts (via SH2 domain) with NLK (By similarity). Interacts with KPNA4 and KPNA5; KPNA4 may be the primary mediator of nuclear import (By similarity). Interacts with TMF1.

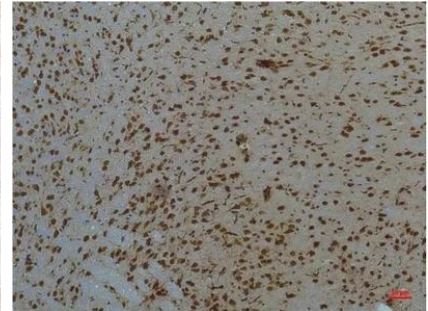
tissue specificity: Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas.



Western blot analysis of 1] Rat Heart Tissue, 2] Mouse Heart Tissue, 3] HeLa with STAT3 Mouse mAb diluted at 1:2,000.



Immunohistochemical analysis of paraffin-embedded Human Colon Carcinoma using STAT3 Mouse mAb diluted at 1:200.



Immunohistochemical analysis of paraffin-embedded Mouse Brain Tissue using STAT3 Mouse mAb diluted at 1:200.