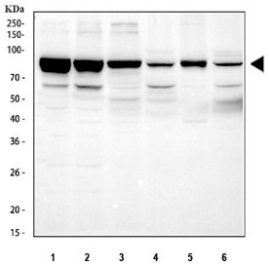
STAT3 Antibody (R32089)

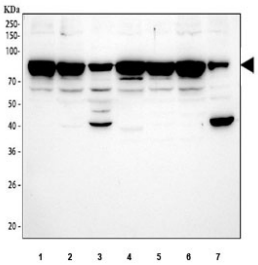
Catalog No.	Formulation	Size
R32089	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

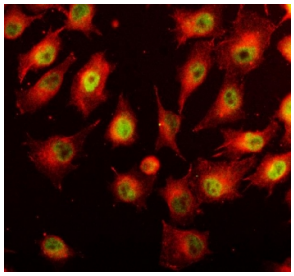
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P40763
Localization	Cytoplasmic, nuclear
Applications	Western blot: 0.5-1ug/ml Immunofluorescence: 5ug/ml Immunoprecipitation: 2ug antibody/500ug lysate Flow cytometry: 1-3ug/million cells Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This STAT3 antibody is available for research use only.



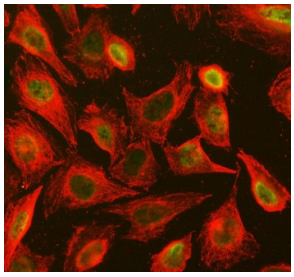
Western blot testing of 1) human HEL, 2) human A549, 3) rat lung, 4) rat heart, 5) mouse lung and 6) mouse heart tissue lysate with STAT3 antibody. Expected molecular weight: ~92 kDa (alpha) and ~83 kDa (beta).



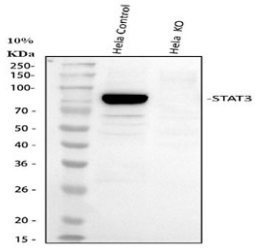
Western blot testing of human 1) HEL, 2) A549, 3) HaCaT, 4) U-251, 5) K562, 6) SiHa and 7) RT4 cell lysate with STAT3 antibody. Expected molecular weight: ~92 kDa (alpha) and ~83 kDa (beta).



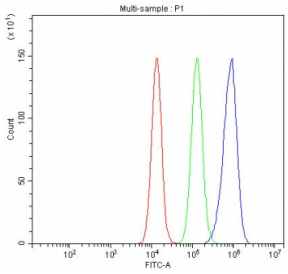
Immunofluorescent staining of FFPE human A549 cells with STAT3 antibody (green) and Beta Tubulin mAb (red). HIER: steam section in pH6 citrate buffer for 20 min.



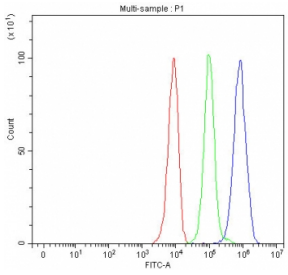
Immunofluorescent staining of FFPE human U-2 OS cells with STAT3 antibody (green) and Beta Tubulin mAb (red). HIER: steam section in pH6 citrate buffer for 20 min.



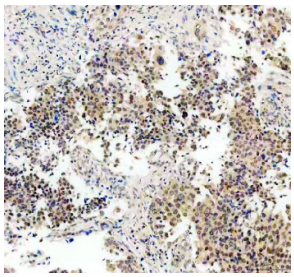
Immunoprecipitation of STAT3 protein from 500ug of human HeLa whole cell lysate with 2ug of STAT3 antibody.



Flow cytometry testing of fixed and permeabilized human SiHa cells with STAT3 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= STAT3 antibody.



Flow cytometry testing of fixed and permeabilized rat PC-12 cells with STAT3 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= STAT3 antibody.



IHC staining of FFPE human lung cancer tissue with STAT3 antibody, HRP-secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

STAT3 (Signal Transducer and Activator of Transcription 3) is a transcription factor that plays a central role in transmitting signals from cytokines, growth factors, and other extracellular stimuli to the nucleus. It belongs to the STAT protein family, which is activated by Janus kinases (JAKs) through phosphorylation. Once phosphorylated, STAT3 dimerizes, translocates to the nucleus, and binds DNA to regulate gene expression.

STAT3 influences a wide range of cellular processes, including proliferation, differentiation, survival, angiogenesis, and immune responses. It is particularly important in maintaining homeostasis during inflammation and immunity. Under normal physiological conditions, STAT3 activation is transient and tightly regulated. However, persistent activation of STAT3 has been implicated in various pathological states, including chronic inflammation, autoimmune diseases, and cancer.

In oncology research, STAT3 is studied extensively due to its oncogenic potential. Constitutive STAT3 activity can promote tumor cell proliferation, inhibit apoptosis, and enhance invasion and metastasis. It also supports tumor progression through effects on the tumor microenvironment, including immune suppression and angiogenesis. Because of these functions, STAT3 remains a key focus in targeted drug discovery and biomarker studies.

A STAT3 antibody is a valuable reagent for detecting the proteinÃ¢Â€Â™s expression, activation state, and cellular localization. Researchers commonly employ a STAT3 antibody in applications such as western blotting, immunohistochemistry, ELISA, and immunofluorescence. NSJ Bioreagents provides a high-quality STAT3 antibody to facilitate studies in cancer biology, immunology, and cell signaling.

Application Notes

Optimal dilution of the STAT3 antibody should be determined by the researcher.

Immunogen

Amino acids EKQQMLEQHLQDVRKRVQDLEQKMKVVEN of human STAT3 were used as the immunogen for the STAT3 antibody.

Storage

After reconstitution, the STAT3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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