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STAT3 Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AW5072

Specification

STAT3 Antibody - Product Information

Application	**WB,E**
Primary Accession	P40763
Other Accession	P52631, Q19S50, P42227
Reactivity	**Human, Mouse**
Predicted	**Pig, Rat**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**H=88;M=88 KDa**
Isotype	**IgG2a,κ**
Antigen Source	**HUMAN**

STAT3 Antibody - Additional Information

Gene ID 6774

Antigen Region
1-280

Other Names
Signal transducer and activator of transcription 3, Acute-phase response factor, STAT3, APRF

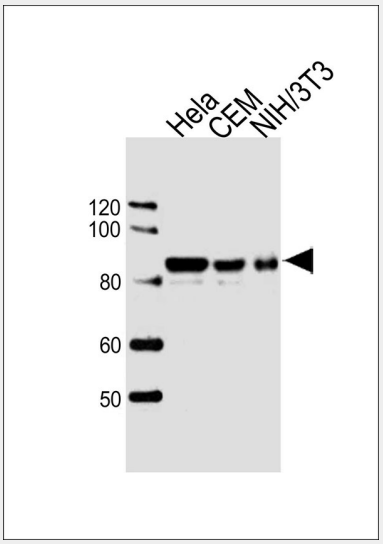
Dilution
WB~~1:1000

Target/Specificity
This STAT3 antibody is generated from a mouse immunized with a recombinant protein from human.

Format
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions



Western blot analysis of lysates from Hela,CEM,mouse NIH/3T3 cell line (from left to right), using Stat3 Antibody(Cat. #AW5072). AW5072 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.Lysates at 20ug per lane.

STAT3 Antibody - Background

Signal transducer and transcription activator that mediates cellular responses to interleukins, KITLG/SCF and other growth factors. May mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4. Binds to the interleukin-6 (IL-6)- responsive elements identified in the promoters of various acute- phase protein genes. Activated by IL31 through IL31RA. Cytoplasmic STAT3 represses macroautophagy by inhibiting EIF2AK2/PKR activity. Plays an important role in host defense in methicillin-resistant S.aureus lung infection by regulating the expression of the antimicrobial lectin REG3G (By similarity).

STAT3 Antibody - References

Akira S.,et al.Cell 77:63-71(1994).

STAT3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

STAT3 Antibody - Protein Information

Name STAT3 (HGNC:11364)

Function
Signal transducer and transcription activator that mediates cellular responses to interleukins, KITLG/SCF, LEP and other growth factors (PubMed:10688651, PubMed:12359225, PubMed:12873986, PubMed:15194700, PubMed:17344214, PubMed:18242580, PubMed:23084476). Once activated, recruits coactivators, such as NCOA1 or MED1, to the promoter region of the target gene (PubMed:17344214). May mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4 (PubMed:12873986). Upon activation of IL6ST/gp130 signaling by interleukin-6 (IL6), binds to the IL6-responsive elements identified in the promoters of various acute-phase protein genes (PubMed:12359225). Activated by IL31 through IL31RA (PubMed:15194700). Acts as a regulator of inflammatory response by regulating differentiation of naive CD4(+)

Della Pietra L.,et al.Gene 213:119-124(1998).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Della Pietra L.,et al.Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
Zhang X.,et al.Science 267:1990-1994(1995).

T-cells into T-helper Th17 or regulatory T-cells (Treg): deacetylation and oxidation of lysine residues by LOXL3, leads to disrupt STAT3 dimerization and inhibit its transcription activity (PubMed:28065600). Involved in cell cycle regulation by inducing the expression of key genes for the progression from G1 to S phase, such as CCND1 (PubMed:17344214). Mediates the effects of LEP on melanocortin production, body energy homeostasis and lactation (By similarity). May play an apoptotic role by transctivating BIRC5 expression under LEP activation (PubMed:18242580). Cytoplasmic STAT3 represses macroautophagy by inhibiting EIF2AK2/PKR activity (PubMed:23084476). Plays a crucial role in basal beta cell functions, such as regulation of insulin secretion (By similarity).

Cellular Location
Cytoplasm. Nucleus. Note=Shuttles between the nucleus and the cytoplasm. Translocated into the nucleus upon tyrosine phosphorylation and dimerization, in response to signaling by activated FGFR1, FGFR2, FGFR3 or FGFR4. Constitutive nuclear presence is independent of tyrosine phosphorylation. Predominantly present in the cytoplasm without stimuli. Upon leukemia inhibitory factor (LIF) stimulation, accumulates in the nucleus. The complex composed of BART and ARL2 plays an important role in the nuclear translocation and retention of STAT3 Identified in a complex with LYN and PAG1

Tissue Location
Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. Expressed in naive CD4(+) T cells as well as T-helper Th17, Th1 and Th2 cells (PubMed:31899195)

STAT3 Antibody - Protocols

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Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture