

**STAT3 Antibody (clone 7G3H4)**  
Mouse Monoclonal Antibody  
Catalog # ALS13157**Specification****STAT3 Antibody (clone 7G3H4) - Product Information**

Application	IHC
Primary Accession	<a href="#">P40763</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	88kDa KDa

**STAT3 Antibody (clone 7G3H4) - Additional Information****Gene ID** 6774**Other Names**

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

**Target/Specificity**

Human STAT3

**Reconstitution & Storage**

Long term: -20°C; Short term: +4°C. Avoid repeat freeze-thaw cycles.

**Precautions**

STAT3 Antibody (clone 7G3H4) is for research use only and not for use in diagnostic or therapeutic procedures.

**STAT3 Antibody (clone 7G3H4) - Protein Information****Name** STAT3 {ECO:0000303|PubMed:9630560, ECO:0000312|HGNC:HGNC:11364}**Function**

Signal transducer and transcription activator that mediates cellular responses to interleukins, KITLG/SCF, LEP and other growth factors (PubMed:&lt;a

href="http://www.uniprot.org/citations/10688651" target="\_blank"&gt;10688651&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/12359225" target="\_blank"&gt;12359225&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/12873986" target="\_blank"&gt;12873986&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/15194700" target="\_blank"&gt;15194700&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/15653507" target="\_blank"&gt;15653507&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/16285960" target="\_blank"&gt;16285960&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/17344214" target="\_blank"&gt;17344214&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/18242580" target="\_blank"&gt;18242580&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/18782771" target="\_blank"&gt;18782771&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/22306293" target="\_blank"&gt;22306293&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/23084476" target="\_blank"&gt;23084476&lt;/a&gt;, PubMed:&lt;a

href="http://www.uniprot.org/citations/28262505" target="\_blank">28262505</a>, PubMed:<a href="http://www.uniprot.org/citations/32929201" target="\_blank">32929201</a>). Once activated, recruits coactivators, such as NCOA1 or MED1, to the promoter region of the target gene (PubMed:<a href="http://www.uniprot.org/citations/15653507" target="\_blank">15653507</a>, PubMed:<a href="http://www.uniprot.org/citations/16285960" target="\_blank">16285960</a>, PubMed:<a href="http://www.uniprot.org/citations/17344214" target="\_blank">17344214</a>, PubMed:<a href="http://www.uniprot.org/citations/18782771" target="\_blank">18782771</a>, PubMed:<a href="http://www.uniprot.org/citations/28262505" target="\_blank">28262505</a>, PubMed:<a href="http://www.uniprot.org/citations/32929201" target="\_blank">32929201</a>). May mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4 (PubMed:<a href="http://www.uniprot.org/citations/12873986" target="\_blank">12873986</a>). 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:<a href="http://www.uniprot.org/citations/12359225" target="\_blank">12359225</a>). Activated by IL31 through IL31RA (PubMed:<a href="http://www.uniprot.org/citations/15194700" target="\_blank">15194700</a>). Acts as a regulator of inflammatory response by regulating differentiation of naive CD4(+) T-cells into T-helper Th17 or regulatory T-cells (Treg): acetylation promotes its transcription activity and cell differentiation while deacetylation and oxidation of lysine residues by LOXL3 inhibits differentiation (PubMed:<a href="http://www.uniprot.org/citations/28065600" target="\_blank">28065600</a>, PubMed:<a href="http://www.uniprot.org/citations/28262505" target="\_blank">28262505</a>). Involved in cell cycle regulation by inducing the expression of key genes for the progression from G1 to S phase, such as CCND1 (PubMed:<a href="http://www.uniprot.org/citations/17344214" target="\_blank">17344214</a>). Mediates the effects of LEP on melanocortin production, body energy homeostasis and lactation (By similarity). May play an apoptotic role by transactivating BIRC5 expression under LEP activation (PubMed:<a href="http://www.uniprot.org/citations/18242580" target="\_blank">18242580</a>). Cytoplasmic STAT3 represses macroautophagy by inhibiting EIF2AK2/PKR activity (PubMed:<a href="http://www.uniprot.org/citations/23084476" target="\_blank">23084476</a>). Plays a crucial role in basal beta cell functions, such as regulation of insulin secretion (By similarity). Following JAK/STAT signaling activation and as part of a complex with NFATC3 and NFATC4, binds to the alpha-beta E4 promoter region of CRYAB and activates transcription in cardiomyocytes (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 (PubMed:15653507, PubMed:16285960). 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. Translocates to the nucleus in the presence of EDN1 (By similarity). {ECO:0000250|UniProtKB:P52631, ECO:0000269|PubMed:15653507, ECO:0000269|PubMed:16285960}

### 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)

### Volume

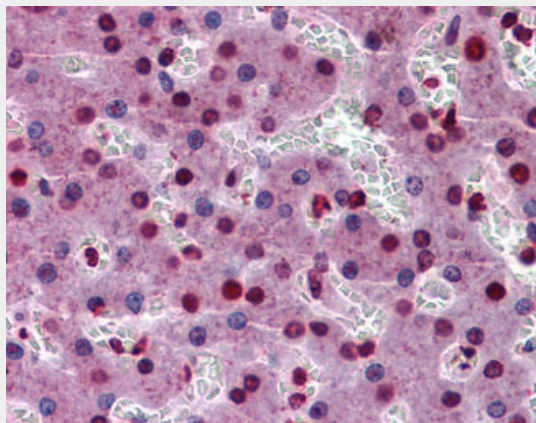
50 µl

### STAT3 Antibody (clone 7G3H4) - Protocols

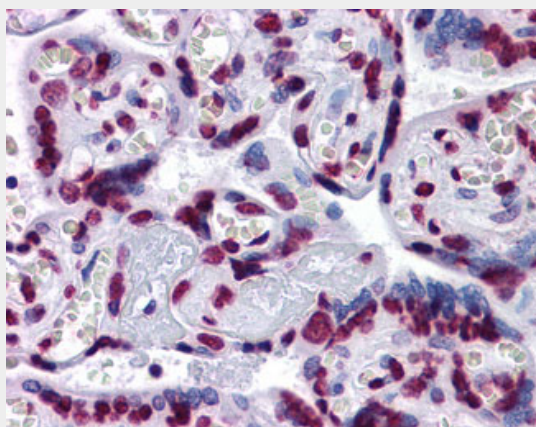
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

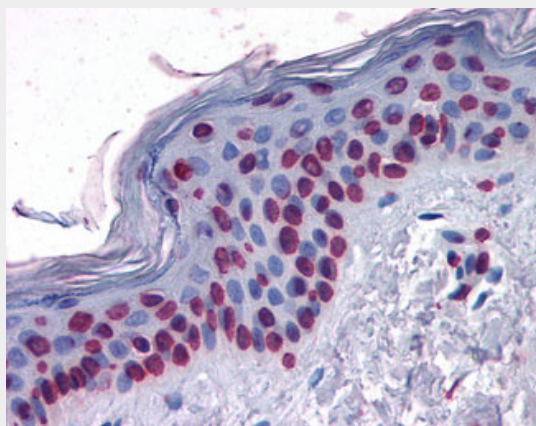
#### STAT3 Antibody (clone 7G3H4) - Images



Anti-STAT3 antibody IHC of human liver.



Anti-STAT3 antibody IHC of human placenta.



Anti-STAT3 antibody IHC of human skin.

### **STAT3 Antibody (clone 7G3H4) - 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 (clone 7G3H4) - References**

Akira S.,et al.Cell 77:63-71(1994).  
Della Pietra L.,et al.Gene 213:119-124(1998).  
Feinstein E.,et al.Patent number EP2440214, 18-APR-2012.  
Ota T.,et al.Nat. Genet. 36:40-45(2004).  
Zody M.C.,et al.Nature 440:1045-1049(2006).