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STAT4 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13722b

Specification

STAT4 Antibody (C-term) - Product Information

Application	**IF, WB, IHC-P,E**
Primary Accession	Q14765
Other Accession	P42228, NP_003142.1
Reactivity	**Human**
Predicted	**Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**85941**
Antigen Region	**666-695**

STAT4 Antibody (C-term) - Additional Information

Gene ID 6775

Other Names
Signal transducer and activator of transcription 4, STAT4

Target/Specificity
This STAT4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 666-695 amino acids from the C-terminal region of human STAT4.

Dilution
IF~~1:10~50
WB~~1:1000
IHC-P~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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
STAT4 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

STAT4 Antibody (C-term) - Protein Information

Name STAT4

Function Transcriptional regulator mainly expressed in hematopoietic cells that plays a critical role in cellular growth, differentiation and immune response (PubMed:10961885, PubMed:37256972, PubMed:8943379). Plays a key role in the differentiation of T-helper 1 cells and the production of interferon-gamma (PubMed:12213961, PubMed:35614130). Participates also in multiple neutrophil functions including chemotaxis and production of the neutrophil extracellular traps (By similarity). After IL12 binding to its receptor IL12RB2, STAT4 interacts with the intracellular domain of IL12RB2 and becomes tyrosine phosphorylated (PubMed:10415122, PubMed:7638186). Phosphorylated STAT4 then homodimerizes and migrates to the nucleus where it can recognize STAT target sequences present in IL12 responsive genes. Although IL12 appears to be the predominant activating signal, STAT4 can also be phosphorylated and activated in response to IFN-gamma stimulation via JAK1 and TYK2 and in response to different interleukins including IL23, IL2 and IL35 (PubMed:11114383, PubMed:34508746). Transcription activation of IFN-gamma gene is mediated by interaction with JUN that forms a complex that efficiently interacts with the AP-1-related sequence of the IFN-gamma promoter (By similarity). In response to IFN- alpha/beta signaling, acts as a transcriptional repressor and suppresses IL5 and IL13 mRNA expression during response to T-cell receptor (TCR) activation (PubMed:26990433).

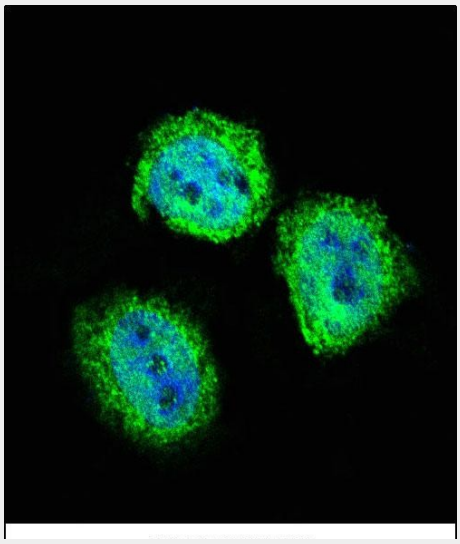
Cellular Location
Cytoplasm. Nucleus. Note=Translocated into the nucleus in response to phosphorylation.

STAT4 Antibody (C-term) - Protocols

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

STAT4 Antibody (C-term) - Images



Confocal immunofluorescent analysis of STAT4 Antibody (C-term) (Cat#AP13722b) with Hela cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). DAPI was used to stain the

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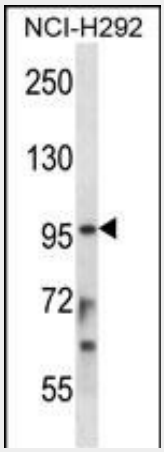
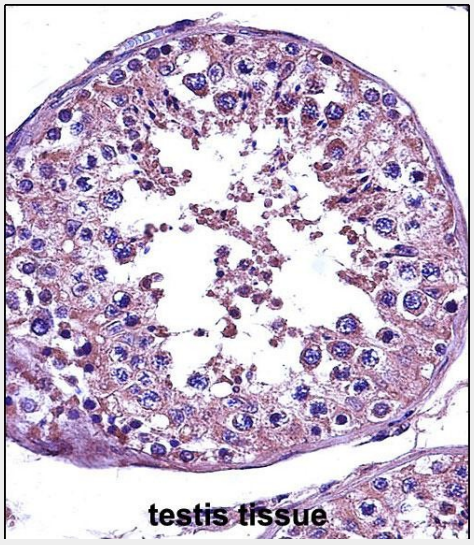
cell nuclear (blue).



STAT4 Antibody (C-term) (Cat. #AP13722b) western blot analysis in NCI-H292 cell line lysates (35ug/lane).This demonstrates the STAT4 antibody detected the STAT4 protein (arrow).



STAT4 Antibody (C-term) (Cat. #AP13722b)immunohistochemistry analysis in formalin fixed and paraffin embedded human testis tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of STAT4 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

STAT4 Antibody (C-term) - Background

The protein encoded by this gene is a member of the STAT family of transcription factors. 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 essential for mediating responses to IL12 in lymphocytes, and regulating the differentiation of T helper cells.

STAT4 Antibody (C-term) - References

Plant, D., et al. Ann. Rheum. Dis. 69(8):1548-1553(2010)
Gestermann, N., et al. Genes Immun. 11(5):432-438(2010)
Schuurhof, A., et al. Pediatr. Pulmonol. 45(6):608-613(2010)

Vuong, M.T., et al. PLoS ONE 5 (5), E10559 (2010) :
Glas, J., et al. PLoS ONE 5 (4), E10373 (2010) :