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Phospho-STAT4-Y693 Antibody Blocking Peptide
Synthetic peptide
Catalog # BP3264a

Specification

Phospho-STAT4-Y693 Antibody Blocking Peptide - Product Information

Primary Accession Q14765

Phospho-STAT4-Y693 Antibody Blocking Peptide - Additional Information

Gene ID 6775

Other Names
Signal transducer and activator of transcription 4, STAT4

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP3264a was selected from the region of human Phospho-STAT4-Y693. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Phospho-STAT4-Y693 Antibody Blocking Peptide - 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:8943379, PubMed:10961885, PubMed:37256972). 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:7638186, PubMed:<a

href="http://www.uniprot.org/citations/10415122" target="_blank">10415122). 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.

Phospho-STAT4-Y693 Antibody Blocking Peptide - Protocols

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

- Blocking Peptides

Phospho-STAT4-Y693 Antibody Blocking Peptide - Images

Phospho-STAT4-Y693 Antibody Blocking Peptide - Background

STAT4 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. STAT4 is essential for mediating responses to IL12 in lymphocytes, and regulating the differentiation of T helper cells.

Phospho-STAT4-Y693 Antibody Blocking Peptide - References

Torpey, N., et al., J. Biol. Chem. 279(25):26789-26796 (2004).Arora, T., et al., J. Biol. Chem. 278(24):21327-21330 (2003).Monteleone, G., et al., J. Immunol. 170(1):300-307 (2003).Lovato, P., et al., J. Biol. Chem. 278(19):16777-16781 (2003).Nakahira, M., et al., J. Immunol. 168(3):1146-1153 (2002).