

**TYK2 Antibody (C-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP7724b****Specification**

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**TYK2 Antibody (C-term) Blocking Peptide - Product Information**Primary Accession [P29597](#)**TYK2 Antibody (C-term) Blocking Peptide - Additional Information****Gene ID** 7297**Other Names**

Non-receptor tyrosine-protein kinase TYK2, TYK2

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP7724b](/product/products/AP7724b) was selected from the C-term region of human TYK2. 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.

**TYK2 Antibody (C-term) Blocking Peptide - Protein Information****Name** TYK2**Function**

Tyrosine kinase of the non-receptor type involved in numerous cytokines and interferons signaling, which regulates cell growth, development, cell migration, innate and adaptive immunity (PubMed: [8232552](http://www.uniprot.org/citations/8232552), PubMed: [7813427](http://www.uniprot.org/citations/7813427), PubMed: [7657660](http://www.uniprot.org/citations/7657660), PubMed: [10995743](http://www.uniprot.org/citations/10995743), PubMed: [10542297](http://www.uniprot.org/citations/10542297)). Plays both structural and catalytic roles in numerous interleukins and interferons (IFN-alpha/beta) signaling (PubMed: [10542297](http://www.uniprot.org/citations/10542297)). Associates with heterodimeric cytokine receptor complexes and activates STAT family members including STAT1, STAT3, STAT4 or STAT6 (PubMed: [10542297](http://www.uniprot.org/citations/10542297), PubMed: [10542297](http://www.uniprot.org/citations/10542297)).

href="http://www.uniprot.org/citations/7638186" target="\_blank">7638186</a>). The heterodimeric cytokine receptor complexes are composed of (1) a TYK2-associated receptor chain (IFNAR1, IL12RB1, IL10RB or IL13RA1), and (2) a second receptor chain associated either with JAK1 or JAK2 (PubMed:<a href="http://www.uniprot.org/citations/7813427" target="\_blank">7813427</a>, PubMed:<a href="http://www.uniprot.org/citations/10542297" target="\_blank">10542297</a>, PubMed:<a href="http://www.uniprot.org/citations/7526154" target="\_blank">7526154</a>, PubMed:<a href="http://www.uniprot.org/citations/25762719" target="\_blank">25762719</a>). In response to cytokine-binding to receptors, phosphorylates and activates receptors (IFNAR1, IL12RB1, IL10RB or IL13RA1), creating docking sites for STAT members (PubMed:<a href="http://www.uniprot.org/citations/7526154" target="\_blank">7526154</a>, PubMed:<a href="http://www.uniprot.org/citations/7657660" target="\_blank">7657660</a>). In turn, recruited STATs are phosphorylated by TYK2 (or JAK1/JAK2 on the second receptor chain), form homo- and heterodimers, translocate to the nucleus, and regulate cytokine/growth factor responsive genes (PubMed:<a href="http://www.uniprot.org/citations/7657660" target="\_blank">7657660</a>, PubMed:<a href="http://www.uniprot.org/citations/10542297" target="\_blank">10542297</a>, PubMed:<a href="http://www.uniprot.org/citations/25762719" target="\_blank">25762719</a>). Negatively regulates STAT3 activity by promoting phosphorylation at a specific tyrosine that differs from the site used for signaling (PubMed:<a href="http://www.uniprot.org/citations/29162862" target="\_blank">29162862</a>).

#### **Tissue Location**

Observed in all cell lines analyzed. Expressed in a variety of lymphoid and non-lymphoid cell lines

#### **TYK2 Antibody (C-term) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

#### **TYK2 Antibody (C-term) Blocking Peptide - Images**

#### **TYK2 Antibody (C-term) Blocking Peptide - Background**

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the  $\gamma$  phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. The STE group (homologs of yeast Sterile 7, 11, 20 kinases) consists of 50 kinases related to the mitogen-activated protein kinase (MAPK) cascade families (Ste7/MAP2K, Ste11/MAP3K, and Ste20/MAP4K). MAP kinase cascades, consisting of a MAPK and one or more upstream regulatory kinases (MAPKKs) have been best characterized in the yeast pheromone response pathway. Pheromones bind to Ste cell surface receptors and activate yeast MAPK pathway.

#### **TYK2 Antibody (C-term) Blocking Peptide - References**

Ragimbeau, J., et al., EMBO J. 22(3):537-547 (2003). Trask, B., et al., Genomics 15(1):133-145 (1993). Firmbach-Kraft, I., et al., Oncogene 5(9):1329-1336 (1990). Krolewski, J.J., et al., Oncogene 5(3):277-282 (1990).