

**FOXK2 Antibody (N-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP14381a****Specification**

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**FOXK2 Antibody (N-term) Blocking Peptide - Product Information**Primary Accession [Q01167](#)**FOXK2 Antibody (N-term) Blocking Peptide - Additional Information**

Gene ID 3607

**Other Names**

Forkhead box protein K2, Cellular transcription factor ILF-1, FOXK1, Interleukin enhancer-binding factor 1, FOXK2, ILF, ILF1

**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.

**FOXK2 Antibody (N-term) Blocking Peptide - Protein Information**

Name FOXK2

**Function**

Transcriptional regulator involved in different processes such as glucose metabolism, aerobic glycolysis and autophagy (By similarity). Recognizes and binds the forkhead DNA sequence motif (5'- GTAAACA-3') and can both act as a transcription activator or repressor, depending on the context (PubMed:<a href="http://www.uniprot.org/citations/22083952" target="\_blank">22083952</a>, PubMed:<a href="http://www.uniprot.org/citations/25451922" target="\_blank">25451922</a>). Together with FOXK1, acts as a key regulator of metabolic reprogramming towards aerobic glycolysis, a process in which glucose is converted to lactate in the presence of oxygen (By similarity). Acts by promoting expression of enzymes for glycolysis (such as hexokinase-2 (HK2), phosphofructokinase, pyruvate kinase (PKLR) and lactate dehydrogenase), while suppressing further oxidation of pyruvate in the mitochondria by up-regulating pyruvate dehydrogenase kinases PDK1 and PDK4 (By similarity). Probably plays a role in gluconeogenesis during overnight fasting, when lactate from white adipose tissue and muscle is the main substrate (By similarity). Together with FOXK1, acts as a negative regulator of autophagy in skeletal muscle: in response to starvation, enters the nucleus, binds the promoters of autophagy genes and represses their expression, preventing proteolysis of skeletal muscle proteins (By similarity). In addition to the 5'-GTAAACA-3' DNA motif, also binds the 5'-TGANTCA-3' palindromic DNA motif, and co-associates with JUN/AP-1 to activate transcription (PubMed:<a

href="http://www.uniprot.org/citations/22083952" target="\_blank">22083952</a>). Also able to bind to a minimal DNA heteroduplex containing a G/T-mismatch with 5'- TRT[G/T]NB-3' sequence (PubMed:<a href="http://www.uniprot.org/citations/20097901" target="\_blank">20097901</a>). Binds to NFAT-like motifs (purine-rich) in the IL2 promoter (PubMed:<a href="http://www.uniprot.org/citations/1339390" target="\_blank">1339390</a>). Positively regulates WNT/beta-catenin signaling by translocating DVL proteins into the nucleus (PubMed:<a href="http://www.uniprot.org/citations/25805136" target="\_blank">25805136</a>). Also binds to HIV-1 long terminal repeat. May be involved in both positive and negative regulation of important viral and cellular promoter elements (PubMed:<a href="http://www.uniprot.org/citations/1909027" target="\_blank">1909027</a>).

**Cellular Location**

Nucleus. Cytoplasm {ECO:0000250|UniProtKB:Q3UCQ1}

**Tissue Location**

Expressed in both lymphoid and non-lymphoid cells.

**FO XK2 Antibody (N-term) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

**FO XK2 Antibody (N-term) Blocking Peptide - Images****FO XK2 Antibody (N-term) Blocking Peptide - Background**

The protein encoded by this gene contains a fork head DNA binding domain. This protein can bind to the purine-rich motifs of the HIV long terminal repeat (LTR), and to the similar purine-rich motif in the interleukin 2 (IL2) promoter. It may be involved in the regulation of viral and cellular promoter elements. [provided by RefSeq].

**FO XK2 Antibody (N-term) Blocking Peptide - References**

Fujii, Y., et al. J. Biochem. 147(5):705-709(2010) Sugiyama, N., et al. Mol. Cell Proteomics 6(6):1103-1109(2007) Matsuoka, S., et al. Science 316(5828):1160-1166(2007) Beausoleil, S.A., et al. Nat. Biotechnol. 24(10):1285-1292(2006) Tsai, K.L., et al. J. Biol. Chem. 281(25):17400-17409(2006)