

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

FOXK2 Antibody (N-term) Blocking Peptide - Product InformationPrimary 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:22083952, PubMed:25451922). 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:22083952). Also able to bind to a minimal DNA heteroduplex containing a G/T-mismatch with 5'- TRT[G/T]NB-3' sequence (PubMed:20097901). Binds to NFAT-like motifs (purine-rich) in the IL2 promoter (PubMed:1339390). Positively regulates WNT/beta-catenin signaling by translocating DVL proteins into the nucleus (PubMed:25805136). 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:1909027).

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)