

ILF3 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP9317c**Specification**

ILF3 Antibody (Center) Blocking Peptide - Product InformationPrimary Accession [Q12906](#)**ILF3 Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 3609**Other Names**

Interleukin enhancer-binding factor 3, Double-stranded RNA-binding protein 76, DRBP76, M-phase phosphoprotein 4, MPP4, Nuclear factor associated with dsRNA, NFAR, Nuclear factor of activated T-cells 90 kDa, NF-AT-90, Translational control protein 80, TCP80, ILF3, DRBF, MPHOSPH4, NF90

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.

ILF3 Antibody (Center) Blocking Peptide - Protein Information**Name** ILF3**Synonyms** DRBF, MPHOSPH4, NF90**Function**

RNA-binding protein that plays an essential role in the biogenesis of circular RNAs (circRNAs) which are produced by back-splicing circularization of pre-mRNAs. Within the nucleus, promotes circRNAs processing by stabilizing the regulatory elements residing in the flanking introns of the circularized exons. Plays thereby a role in the back-splicing of a subset of circRNAs (PubMed:28625552). As a consequence, participates in a wide range of transcriptional and post-transcriptional processes. Binds to poly-U elements and AU-rich elements (AREs) in the 3'-UTR of target mRNAs (PubMed:14731398). Upon viral infection, ILF3 accumulates in the cytoplasm and participates in the innate antiviral response (PubMed:21123651, PubMed:34110282). Mechanistically, ILF3 becomes phosphorylated and activated by the double-stranded RNA-activated protein kinase/PKR which releases ILF3 from cellular mature circRNAs. In turn, unbound ILF3 molecules are able to interact with and thus inhibit viral mRNAs (PubMed:21123651, PubMed:28625552).

Cellular Location

Nucleus, nucleolus. Cytoplasm. Nucleus. Note=Localizes in the cytoplasm in response to viral infection. The unphosphorylated form is retained in the nucleus by ILF2. Phosphorylation at Thr-188 and Thr-315 causes the dissociation of ILF2 from the ILF2-ILF3 complex resulting in a cytoplasmic sequestration of ILF3. Localized in cytoplasmic mRNP granules containing untranslated mRNAs.

Tissue Location

Ubiquitous.

ILF3 Antibody (Center) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

ILF3 Antibody (Center) Blocking Peptide - Images**ILF3 Antibody (Center) Blocking Peptide - Background**

ILF3 gene encodes a double-stranded RNA (dsRNA) binding protein that complexes with other proteins, dsRNAs, small noncoding RNAs, and mRNAs to regulate gene expression and stabilize mRNAs. This protein was first discovered to be a subunit of the nuclear factor of activated T-cells (NFAT); a transcription factor required for T-cell expression of interleukin 2. NFAT is a heterodimer of 45kDa and 90 kDa proteins, the larger of which is the product of this protein. These proteins have been shown to affect the redistribution of nuclear mRNA to the cytoplasm. Knockdown of NF45 or NF90 protein retards cell growth; possibly by inhibition of mRNA stabilization. In contrast, an isoform (NF110) of this gene that is predominantly restricted to the nucleus has only minor effects on cell growth when its levels are reduced.

ILF3 Antibody (Center) Blocking Peptide - References

Kiesler,P., et.al., J. Biol. Chem. 285 (11), 8256-8267 (2010)Wang,P., et.al., J. Virol. 83 (16), 7850-7861 (2009)Sakamoto,S., et.al., Mol. Cell. Biol. 29 (13), 3754-3769 (2009)