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# ILF3 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51283

## Product Information

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| **Application** | WB |
| **Primary Accession** | Q12906 |
| **Reactivity** | Human, Mouse, Rat |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 95338 |

## Additional Information

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| **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 |
| **Target/Specificity** | KLH-conjugated synthetic peptide encompassing a sequence within the center region of human ILF3. The exact sequence is proprietary. |
| **Dilution** | WB~~ 1:1000 |
| **Format** | 0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50% |
| **Storage** | Store at -20 °C.Stable for 12 months from date of receipt |

## Protein Information

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| **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.

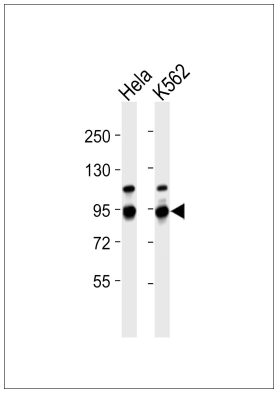
## Background

May facilitate double-stranded RNA-regulated gene expression at the level of post-transcription. Can act as a translation inhibitory protein which binds to coding sequences of acid beta-glucosidase (GCase) and other mRNAs and functions at the initiation phase of GCase mRNA translation, probably by inhibiting its binding to polysomes. Can regulate protein arginine N- methyltransferase 1 activity. May regulate transcription of the IL2 gene during T-cell activation. Can promote the formation of stable DNA-dependent protein kinase holoenzyme complexes on DNA. The phosphorylated form at Thr-188 and Thr-315, in concert with EIF2AK2/PKR can inhibit vesicular stomatitis virus (VSV) replication (By similarity).

## References

Kao P.N.,et al.J. Biol. Chem. 269:20691-20699(1994).
Patel R.C.,et al.J. Biol. Chem. 274:20432-20437(1999).
Xu Y.-H.,et al.Mol. Genet. Metab. 68:441-454(1999).
Duchange N.,et al.Gene 261:345-353(2000).
Saunders L.R.,et al.J. Biol. Chem. 276:32300-32312(2001).

## Images




All lanes : Anti-ILF3 Antibody at 1:1000 dilution Lane 1: Hela whole cell lysates Lane 2: K562 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/10000 dilution Predicted band size : 95 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

## Citations

- NF45 and NF90 Bind HIV-1 RNA and Modulate HIV Gene Expression.