# 4E-BP1(Phospho-Thr46) Antibody

Catalog No: #11223

Package Size: #11223-1 50ul #11223-2 100ul



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Product Name	4E-BP1(Phospho-Thr46) Antibody	
Host Species	Rabbit	
Clonality	Polyclonal	
Isotype	IgG	
Purification	Antibodies were produced by immunizing rabbits with synthetic phosphopeptide and KLH conjugates.	
	Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. Non-phospho	
	specific antibodies were removed by chromatogramphy using non-phosphopeptide.	
Applications	WB IHC	
Species Reactivity	Human;Mouse;Rat	
Specificity	The antibody detects endogenous level of 4E-BP1 only when phosphorylated at Threonine 45.	
Immunogen Type	Peptide-KLH	
Immunogen Description	Peptide sequence around phosphorylation site of threonine 46 (S-T-T(p)-P-G) derived from Human 4E-BP1.	
Conjugates	Unconjugated	
Target Name	4E-BP1	
Modification	Phospho	
Other Names	EIF4EBP1; PHAS-1;	
Accession No.	Swiss-Prot: Q13541NCBI Protein: NP_004086.1	
Concentration	1.0mg/ml	
Formulation	Supplied at 1.0mg/mL in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02%	
	sodium azide and 50% glycerol.	
Storage	Store at -20°C for long term preservation (recommended). Store at 4°C for short term use.	

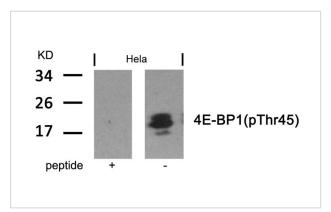
## **Application Details**

Predicted MW: 18kd

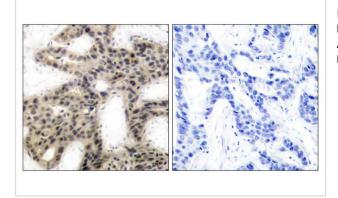
Western blotting: 1:500~1:1000

Immunohistochemistry: 1:50~1:100

# **Images**



Western blot analysis of extracts from Hela cells using 4E-BP1 (Phospho-Thr46) Antibody #11223 and the same antibody preincubated with blocking peptide.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using 4E-BP1(Phospho-Thr45) Antibody #11223(left) or the same antibody preincubated with blocking peptide(right).

## Background

4E-BP1 encodes one member of a family of translation repressor proteins. The protein directly interacts with eukaryotic translation initiation factor 4E (eIF4E), which is a limiting component of the multisubunit complex that recruits 40S ribosomal subunits to the 5' end of mRNAs. Interaction of this protein with eIF4E inhibits complex assembly and represses translation. This protein is phosphorylated in response to various signals including UV irradiation and insulin signaling, resulting in its dissociation from eIF4E and activation of mRNA translation.

Gingras AC, et al. (1998) Genes Dev 12(4): 502-513.

Brugarolas J, et al. (2004) Genes Dev 18(23): 2893-2904.

Kumar V, et al. (2000) EMBO J 19(5): 1087-1097.

Moody CA, et al. (2005) J Virol 79(9): 5499-5506.

Burnett PE, et al. (1998) Proc Natl Acad Sci U S A 95(4): 1432-1437.

### **Published Papers**

Jiumei Cao, Limin Gong, Dong-chuan Guo el at., Thoracic aortic disease in tuberous sclerosis complex: molecular pathogenesis and potential therapies in Tsc2+/n— C mice., Human Molecular Genetics, 19(10):1908-1920(2010)

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el at., Inhibition of mTOR signaling protects photoreceptor cells against serum deprivation by reducing oxidative stress and inducing G2/M cell cycle arrest.In Mol Med Rep on 2016 May by Bin Fan , Fu-Qaing Li et al..PMID: 27035647, , (2016)

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el at., The AMPK-dependent inhibition of autophagy plays a crucial role in protecting photoreceptor from photooxidative injury In J Photochem Photobiol B On2023 AugbyYu-Lin Li , Tian-Zi Zhang et al..PMID:37302163, , (2023)

PMID:37302163

Note: This product is for in vitro research use only and is not intended for use in humans or animals.						
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