

## 4E-BP1 (phospho Thr46) Polyclonal Antibody

Catalog No: YP0002

**Reactivity:** Human; Mouse; Rat

**Applications:** WB;IHC;IF;ELISA

Target: 4E-BP1

Fields: >>EGFR tyrosine kinase inhibitor resistance;>>ErbB signaling pathway;>>HIF-1

signaling pathway;>>mTOR signaling pathway;>>PI3K-Akt signaling

pathway;>>AMPK signaling pathway;>>Longevity regulating pathway;>>Cellular

senescence;>>Insulin signaling pathway;>>Human cytomegalovirus infection;>>Human papillomavirus infection;>>Herpes simplex virus 1 infection;>>Chemical carcinogenesis - receptor activation;>>Acute myeloid

leukemia;>>Choline metabolism in cancer

Gene Name: EIF4EBP1

**Protein Name:** Eukaryotic translation initiation factor 4E-binding protein 1

Q13541

Q60876

Human Gene Id: 1978

**Human Swiss Prot** 

No:

Mouse Gene Id: 13685

**Mouse Swiss Prot** 

No:

**Rat Gene Id**: 116636

Rat Swiss Prot No: Q62622

**Immunogen:** The antiserum was produced against synthesized peptide derived from human

4E-BP1 around the phosphorylation site of Thr45. AA range:13-62

Specificity: Phospho-4E-BP1 (T46) Polyclonal Antibody detects endogenous levels of 4E-

BP1 protein only when phosphorylated at T46.

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.



**Sormedation :** Polyclonal, Rabbit, IgG

**Dilution :** WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:20000.. IF 1:50-200

**Purification:** The antibody was affinity-purified from rabbit antiserum by affinity-

chromatography using epitope-specific immunogen.

Concentration: 1 mg/ml

Storage Stability: -15°C to -25°C/1 year(Do not lower than -25°C)

Observed Band: 18kD

**Cell Pathway:** Regulates Angiogenesis; Insulin Receptor; mTOR; ErbB/HER; Akt\_PKB; AMPK

**Background:** eukaryotic translation initiation factor 4E binding protein 1(EIF4EBP1) Homo

sapiens This gene 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. [provided by RefSeq, Jul 2008],

**Function:** function:Regulates eIF4E activity by preventing its assembly into the eIF4F

complex. Mediates the regulation of protein translation by hormones, growth

factors and other stimuli that signal through the MAP kinase

pathway.,PTM:Phosphorylated on serine and threonine residues in response to insulin, EGF and PDGF. Phosphorylated upon DNA damage, probably by ATM or

ATR., similarity: Belongs to the eIF4E-binding protein

family.,subunit:Nonphosphorylated EIF4EBP1 competes with EIF4G1/EIF4G3 to

interact with EIF4E; insulin stimulated MAP-kinase (MAPK1 and MAPK3) phosphorylation of EIF4EBP1 causes dissociation of the complex allowing EIF4G1/EIF4G3 to bind and consequent initiation of translation. Rapamycin can

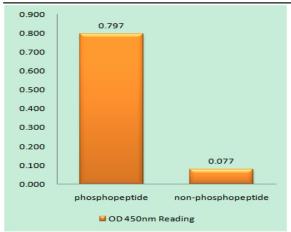
attenuate insulin stimulation, mediated by FKBPs.,

Subcellular Location:

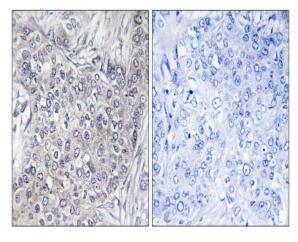
nucleoplasm, cytoplasm, cytosol, protein complex,

**Expression:** Colon, Epithelium, Lung, Placenta, Platelet,

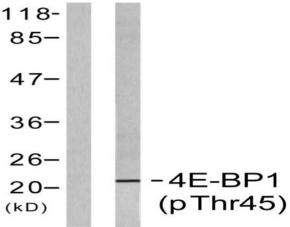
## **Products Images**



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using 4E-BP1 (Phospho-Thr45) Antibody



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using 4E-BP1 (Phospho-Thr45) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from MDA-MB-435 cells treated with EGF 200ng/ml 5', using 4E-BP1 (Phospho-Thr45) Antibody. The lane on the right is blocked with the phospho peptide.