

Anti-phospho-4EBP1 (Thr45)

Rabbit Polyclonal Antibody

Catalog # E35-365R

Lot # J1178-1

Cited Applications

WB, IHC

Suggested Dilutions:

WB: 1:500-1:1000 IHC: 1:50-1:100

Ideal working dilutions for each application should be empirically determined by the investigator.

Specificity

Recognizes the 4EBP1 protein phosphorylated at threonine 45

Cross Reactivity

Human, Mouse and Rat

Host/Isotype/Clone#

Rabbit, IgG

Immunogen

Synthetic phospho-peptide corresponding to amino acid residues surrounding Thr45

Formulation

PBS (pH 7.4) 150mM NaCl, 0.02% sodium azide and 50% glycerol.

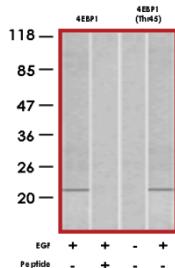
Scientific Background

The translational repressor protein 4EBP1 interacts directly with eukaryotic translation initiation factor 4E (EIF4E). This interaction inhibits the formation of the multi-subunit complex that recruits 40S ribosomal subunits to the 5' end of mRNAs thus preventing cap-dependent translation. Hyperphosphorylation of 4EBP1 disrupts its binding with EIF4E (1). Treating adipose cells with insulin leads to increased 4EBP1 phosphorylation (1). 4EBP1 is expressed in most tissues, with high levels detected in adipose tissue, pancreas and skeletal muscle (2). 4EBP1 is phosphorylated at several residues including Thr45 in response to the phorbol ester TPA.

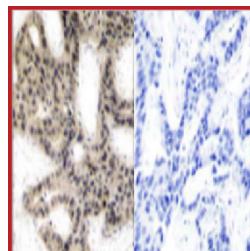
References

- Pause, A. et al: Insulin-dependent stimulation of protein synthesis by phosphorylation of a regulator of 5-prime-cap function. *Nature* 371: 762-767, 1994.
- Tsukiyama-Kohara, K. et al: Tissue distribution, genomic structure, and chromosome mapping of mouse and human eukaryotic initiation factor 4E-binding proteins 1 and 2. *Genomics* 38: 353-363, 1996.

Sample Data



Western blot analysis of extracts from MDA435 cells untreated or treated with EGF (200nm, 5min) using 4EBP1 antibody (lanes 1 and 2) and anti-phospho-4EBP1 (Thr45) antibody (lanes 3 and 4).



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using anti-phospho-4EBP1 (Thr45) antibody.

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Catalog Number	E35-365R
Specific Lot Number	J1178-1
Purification	Affinity chromatography
Stability	1yr at -20°C from date of shipment
Storage & Shipping	Store product at -20°C. For optimal storage, aliquot antibody into smaller quantities after centrifugation and store at recommended temperature. For optimal performance, avoid repeated handling and multiple freeze/thaw cycles. Product shipped on ice packs.

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