

Anti-Phospho-4EBP1/2/3 (Thr45) Antibody (2T82)

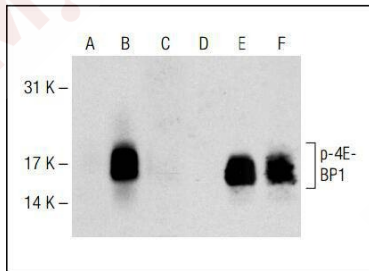
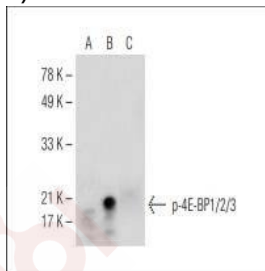
Product Details

Reactivity:	Human, Mouse, Rat
Conjugation:	Unconjugated
Molecular Weight:	Theoretical: 21 kDa.
Clone:	2T82
Purification:	ProA affinity purified

Applications

1. Western blot analysis of 4E-BP1/2/3 phosphorylation in untreated (A), calyculin A treated (B) and calyculin A and lambda protein phosphatase treated (C) Jurkat whole cell lysates.
2. Western blot analysis of 4E-BP1 phosphorylation in nontransfected (A,D), untreated human 4E-BP1 transfected (B,E) and lambda protein phosphatase treated human 4E-BP1 transfected (C,F) 293T whole cell lysates. Antibodies tested include p-4E-BP1/2/3 (A,B,C) and 4E-BP1 (D,E, F).

Verified Activity:



Application: IF, IP, WB

Recommended WB: 1:100-1000; IP: 1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)

Properties

Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.

Shipping: Shipping with blue ice.

Antigen Details

Immunogen: Peptide
Gene ID: 1978
Synonyms: p-4EBP1/2/3 (T45);p-4EBP1/2/3 (Thr45);4EBP1/2/3 (p-T45);4EBP1/2/3 (p-Thr45)

Research Background

The multisubunit eukaryotic translation initiation factor (eIF) 4F recruits 40S ribosomal subunits to the 5' end of mRNA. The eIF4F subunit eIF4E interacts directly with the mRNA 5' cap structure. Assembly of the eIF4F complex is inhibited by a family of repressor polypeptides, the eIF4E-binding proteins (4E-BPs). 4E-BP1 (also known as PHAS-1) normally binds eIF4E, inhibiting cap-dependent translation. Hyper-phosphorylation of 4E-BP1 disrupts this binding, activating cap-dependent translation. The PI3-kinase/Akt pathway and the FRAP/mTOR kinase regulate 4E-BP1. 4E-BP1 is phosphorylated in vivo on multiple residues and phosphorylation by FRAP/mTOR on Threonine 37 and Threonine 46 of human 4E-BP1 may prime it for sub-sequent phosphorylation at sites including Serine 65 and Threonine 70. The corresponding rat residues include Threonine 36, Threonine 45, Serine 64 and Threonine 69. In vitro, 4E-BP1 is also phosphorylated by ataxia telangiectasia (ATM) at human Serine 112 (rat Serine 111) in response to an increase in insulin levels.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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