

BACKGROUND

4E-BP1 (also called PHAS-I, eIF4E-binding protein 1) is 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.^{1,2} It mediates the regulation of protein translation by hormones, growth factors and other stimuli that signal through the MAP kinase and mTORC1 pathways.³

References:

1. Gingras, A.C. et al: Gene Dev. 12:502-13, 1998
2. Yamaguchi, S. et al: Cell Metabol. 7:269-276, 2008
3. Gingras, A.C. et al: Gene Dev. 13:1422-1437, 1999

TECHNICAL INFORMATION

Source:

4E-BP1 antibody is a mouse monoclonal Antibody raised against purified recombinant human 4E-BP1 expressed in *E. coli*.

Specificity and Sensitivity:

This antibody detects endogenous levels of 4E-BP1 proteins without cross-reactivity with other family members.

Storage Buffer: PBS and 30% glycerol

Storage:

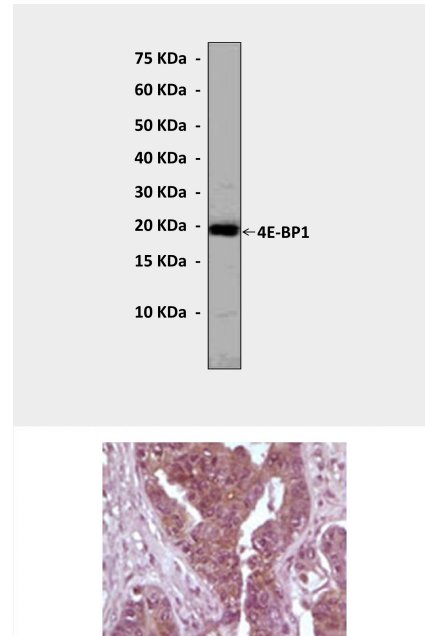
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC	1:200
ICC	n/d
FACS	n/d

**Optimal dilutions must be determined by end user.*

QUALITY CONTROL DATA



Top: Western Blot detection of 4E-BP1 proteins in A431 cell lysate using 4E-BP1 Antibody. **Bottom:** This antibody stains paraffin-embedded human ovary carcinoma tissue in immunohistochemical analysis.

