Data Sheet (Cat.No.TMAY-00090)

TargetMol

Anti-4EBP1 Antibody (9E210)

Product Details

Ig Type:	Mouse IgG1
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	9E210
Purification:	Protein A

Applications

Verified Activity:	1. Immunofluorescence staining of Human 4EBP1 in Hela cells. Cells were fixed with 4% PFA, permeabilzed with 0.3% Triton X-100 in PBS, blocked with 10% serum, and incubated with Mouse anti-Human 4EBP1 monoclonal antibody (1:300) at 37°C 1 hour. Then cells were stained with the Alexa Fluor® 488-conjugated Goat Anti-mouse IgG secondary antibody (green) and counterstained with DAPI (blue). Positive staining was localized to nucleus and cytoplasm. 2. Anti-4EBP1 mouse monoclonal antibody at 1:500 dilution. -Lane A: A431 Whole Cell Lysate. -Lane B: K562 Whole Cell lysate. -Lysates/proteins at 30 µg per lane. -Secondary -Goat Anti-Mouse IgG H&L (Dylight800) at 1/15000 dilution. -Developed using the Odyssey technique. -Performed under reducing conditions. -Predicted band size:13 kDa. -Observed band size:13 kDa
Application:	ELISA,ICC/IF,WB
Recommended	WB: 1:500-1:1000; ELISA: 1:5000-1:10000; ICC-IF: 1:100-1:500

Properties

Stability & Storage:	Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	Recombinant Protein: Human 4E-BP1 / EIF4EBP1 Protein (TMPY-01769)
Antigen Species:	Human
Synonyms:	BP-1;4E-BP1;4EBP1;eukaryotic translation initiation factor 4E binding protein 1;PHAS-I

Research Background

The translational suppressor eIF4E binding protein-1, 4E-BP1 functions as a key regulator in cellular growth, differentiation, apoptosis and survival. The Eif4ebp1 gene, encoding 4E-BP1, is a direct target of a transcription factor activating transcription factor-4 (ATF4), a master regulator of gene expression in stress responses. 4E-BP1 is characterized by its capacity to bind specifically to eIF4E and inhibit its interaction with eIF4G. Phosphorylation of 4E-

BP1 regulates eIF4E availability, and therefore, cap-dependent translation, in cell stress. Binding of eIF4E to eIF4G is inhibited in a competitive manner by 4E-BP1. Phosphorylation of 4E-BP1 decreases the affinity of this protein for eIF4E, thus favouring the binding of eIF4G and enhancing translation. 4E-BP1 is important for beta-cell survival under endoplasmic reticulum (ER) stress. 4E-BP1 mediates the regulation of protein translation by hormones, growth factors and other stimuli that signal through the MAP kinase and mTORC1 pathways. Recently, 4E-BP1 was found to be a key factor, which converges several oncogenic signals, phosphorylates the molecules, and drives the downstream proliferative signals. Recent studies showed that high expression of phosphorylated 4E-BP-1 (p-4E-BP1) is associated with poor prognosis, tumor progression, or nodal metastasis in different human cancers.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481