

Anti-4EBP1 Antibody-PE (2W533)

Product Details

Ig Type:	Mouse IgG1
Reactivity:	Human
Conjugation:	PE
Clone:	2W533
Purification:	Protein A

Applications

Verified Activity:	Profile of anti-4EBP1 reactivity on HepG2 cells analyzed by flow cytometry.
Application:	FCM
Recommended	2 µl/Test, 0.1 mg/ml

Properties

Stability & Storage:	Store at 2°C-8°C for 12 months, do not freeze. Keep away from direct sunlight. Sodium azide is toxic to cells and should be disposed of properly. Flush with large volumes of water during disposal.
Shipping:	Shipping with blue ice.

Antigen Details

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

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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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