

Datasheet for ABIN1177022

anti-eIF4EBP1 antibody (pThr36) (Alexa Fluor 647)



[Go to Product page](#)

2 Publications

Overview

Quantity:	50 tests
Target:	eIF4EBP1 (EIF4EBP1)
Binding Specificity:	pThr36
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This eIF4EBP1 antibody is conjugated to Alexa Fluor 647
Application:	Intracellular Staining (ICS)

Product Details

Brand:	BD Phosflow™
Immunogen:	Phosphorylated Human 4EBP1 (pT45) Peptide
Clone:	M31-16
Isotype:	IgG1 kappa
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	eIF4EBP1 (EIF4EBP1)
Alternative Name:	4EBP1 (EIF4EBP1 Products)

Target Details

Background:	The eukaryotic translation initiation factor 4E-Binding Protein 1 (4EBP1) is a phosphorylated heat- and acid-stable protein (PHAS-I or PHAS-1), and it is regulated by insulin. It is a member of the eIF4E-Binding Protein Family, which also includes the proteins 4EBP2 and 4EBP3. 4EBP1 binds with eukaryotic translation Initiation Factor 4E (eIF4E), which prevents its assembly into the eIF4E complex and inhibits cap-dependent translation. When 4EBP1 is phosphorylated, this binding is disrupted, allowing cap-dependent translation to be activated. Phosphorylation of 4EBP1 is required for protein synthesis, and it mediates the regulation of protein translation by stimuli that signal through the phosphoinositide 3 (PI3) kinase pathway. We found that threonines 36 and 45 (T36/T45) are phosphorylated in resting human peripheral blood mononuclear cells. PI3 kinase inhibitors, such as LY294002 down-regulate the phosphorylation level of 4EBP1 (pT36/pT45). The M31-16 monoclonal antibody recognizes the phosphorylated T36 and T45 of activated human 4EBP1. The orthologous phosphorylation sites in mouse and rat 4EBP1 are T35 and T44. Synonyms: 4E-BP1, EIF4EBP1, P/OKCL6, PHAS-I, PHAS-1
Pathways:	MAPK Signaling , PI3K-Akt Signaling , RTK Signaling , AMPK Signaling , Regulation of Cell Size , BCR Signaling

Application Details

Application Notes:	Either BD Cytofix™ fixation buffer or BD™ Phosflow Fix Buffer I may be used for cell fixation. Any of the three BD™ Phosflow permeabilization buffers may be used.
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Sample Volume:	20 µL
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Restrictions:	For Research Use only
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Handling

Format:	Liquid
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Buffer:	Aqueous buffered solution containing BSA and ≤0.09 % sodium azide.
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Preservative:	Sodium azide
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Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
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Storage:	4 °C
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Storage Comment:	The antibody was conjugated to Alexa Fluor® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed. Store undiluted at 4°C and protected from prolonged exposure
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to light. Do not freeze.

Publications

Product cited in:

Hay, Sonenberg: "Upstream and downstream of mTOR." in: **Genes & development**, Vol. 18, Issue 16, pp. 1926-45, (2004) ([PubMed](#)).

Gingras, Raught, Gygi, Niedzwiecka, Miron, Burley, Polakiewicz, Wyslouch-Cieszyńska, Aebersold, Sonenberg: "Hierarchical phosphorylation of the translation inhibitor 4E-BP1." in: **Genes & development**, Vol. 15, Issue 21, pp. 2852-64, (2001) ([PubMed](#)).