Datasheet for ABIN1177052

anti-EIF4E antibody (pSer209) (PE)

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Overview

Quantity:	50 tests
Target:	EIF4E
Binding Specificity:	pSer209
Reactivity:	Human, Rat, Mouse
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This EIF4E antibody is conjugated to PE
Application:	Intracellular Staining (ICS)

Product Details

Brand:	BD Phosflow™
Immunogen:	Phosphorylated Human eIF4E Peptide
Clone:	J77-925
Isotype:	IgG1 kappa
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	EIF4E
Abstract:	EIF4E Products

Target Details

Background:	The eukaryotic translation Initiation Factor 4E (eIF4E) is a 25-kDa phosphoprotein that specifically binds to the 7-methylguanosine-containing cap of mRNA. eIF4E is the rate-limiting component for the initiation of cap-dependent translation by the eIF4F translation initiation complex, which is composed of eIF4E, eIF4G, and eIF4A. This complex promotes the unwinding of secondary structure at the 5' untranslated region of mRNA that is necessary to expose and locate the AUG initiation codon. Other functions of eIF4E have been identified, such as promoting the export of mRNAs that are involved in cell cycle progression from the nucleus and differentially regulating the translation of certain mRNAs in the cytoplasm. Three mechanisms for eIF4E regulation have been identified: Mnk1-mediated phosphorylation on serine 209 (S209) is required for eIF4E binding to the cap structure, over-expression of phosphorylated eIF4E can lead to increased cell proliferation, suppression of apoptosis, and a transformed phenotype, and interactions with nonphosphorylated eIF4E-binding proteins inhibit the formation of the eIF4F complex. The J77-925 monoclonal antibody recognizes the phosphorylated S209 (pS209) of eIF4E. Synonyms: eIF-4E, CBP, EIF4E1, EIF4EL1, EIF4F, mRNA cap-binding protein
Pathways:	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.
Sample Volume:	20 µL
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	Aqueous buffered solution containing BSA and ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed. Store undiluted at 4°C and protected from prolonged exposure to

Handling

	light. Do not freeze.

Publications

Product cited in:	Culjkovic, Topisirovic, Borden: "Controlling gene expression through RNA regulons: the role of the eukaryotic translation initiation factor eIF4E." in: **Cell cycle (Georgetown, Tex.)**, Vol. 6, Issue 1, pp. 65-9, (2007) (PubMed). Wendel, Silva, Malina, Mills, Zhu, Ueda, Watanabe-Fukunaga, Fukunaga, Teruya-Feldstein, Pelletier, Lowe: "Dissecting eIF4E action in tumorigenesis." in: **Genes & development**, Vol. 21, Issue 24, pp. 3232-7, (2007) (PubMed). Grolleau, Kaplan, Hanash, Beretta, Richardson: "Impaired translational response and increased protein kinase PKR expression in T cells from lupus patients." in: **The Journal of clinical investigation**, Vol. 106, Issue 12, pp. 1561-8, (2001) (PubMed). Waskiewicz, Flynn, Proud, Cooper: "Mitogen-activated protein kinases activate the serine/threonine kinases Mnk1 and Mnk2." in: **The EMBO journal**, Vol. 16, Issue 8, pp. 1909-20, (1997) (PubMed).