Datasheet for 600-401-X52

4EBP1 Antibody

Overview

Description:	Anti-4EBP1 (RABBIT) Antibody - 600-401-X52
Item No.:	600-401-X52
Size:	100 µg
Applications:	ELISA, IF, IHC, WB
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	The translation of mRNA in eukaryotic cells is regulated by the presence of amino acids through multiple mechanisms. One such mechanism involves the evolutionarily conserved serine/threonine kinase TOR (Target of rapamycin, also known as mTOR), which regulates cell growth and cell cycle through its ability to integrate signals from nutrient levels and growth factors. One downstream target of TOR is the eukaryotic initiation factor 4E binding protein 1 (4E-BP1) whose phosphorylation prevents its association with eIF4E, preferentially stimulating translation of mRNAs containing long, highly structured 5'-UTRs. Rapamycin inhibits TOR resulting in reduced cell growth and reduced rates of cell cycle and cell proliferation, at least in part by inhibiting the activity of TOR towards 4E-BP1.
Synonyms:	4E-BP1 Antibody, BP-1, 4EBP1, 4E-BP1, PHAS-I, Eukaryotic translation initiation factor 4E-binding protein 1, Phosphorylated heat- and acid-stable protein regulated by insulin 1
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	EIF4EBP1
Reactivity:	Human, Mouse
Immunogen Type:	Conjugated Peptide

Immunogen:	Anti-4EBP1 antibody was prepared from whole rabbit serum produced by repeated immunizations with a 14 amino acid synthetic peptide from near the C-terminus of human 4EBP1.
Purity/Specificity:	Anti-4EBP1 Antibody was affinity purified from monospecific antiserum by immunoaffinity chromatography. Cross reactivity with 4EBP1 from other sources has not been determined.
Relevant Links:	• UniProtKB - Q13541 • GeneID - 1978 • NCBI - NP_004086.1

Application Details

Tested Applications:	ELISA, IF, IHC, WB
Application Note:	4EBP1 affinity purified antibody has been tested for use in ELISA, immunocytochemistry, immunofluorescence, and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band at ~12.6 kDa in size corresponding to 4E-BP1 by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:25,000 - 1:100,000
IF:	20 µg/mL
WB:	2.5 - 10 µg/mL

Formulation

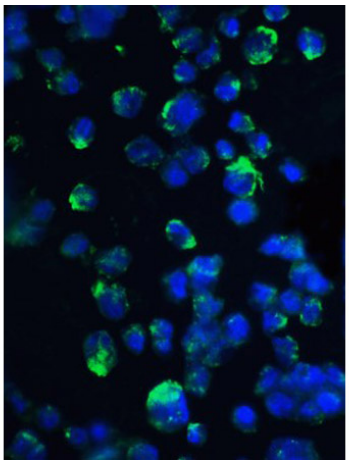
Physical State:	Liquid (sterile filtered)
Concentration:	1 mg/mL by UV absorbance at 280 nm
Buffer:	0.01 M Sodium Phosphate, 0.25 M Sodium Chloride, pH 7.2
Preservative:	0.02% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

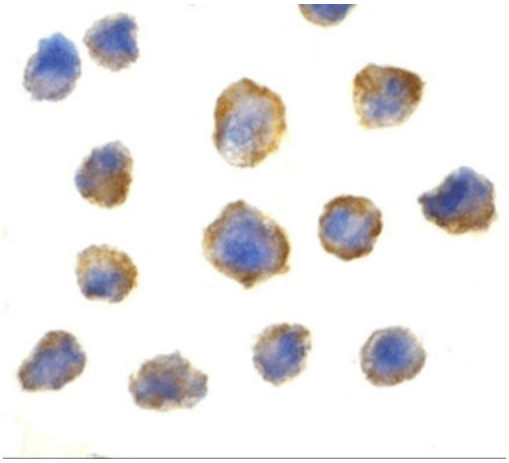
Shipping Condition:	Dry Ice

Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

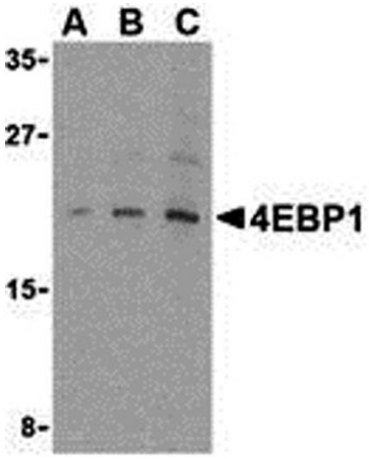
Images



Immunofluorescence Microscopy
Immunofluorescence of 4E-BP1.
Cell: 3T3 cells.
Primary Antibody: 4E-BP1 antibody at 20 µg/ml.
Staining: 4E-BP1 Antibody (green), DAPI (blue).



Immunocytochemistry
Immunocytochemistry of 4E-BP1.
Cell: 3T3 cells.
Priamry Antibody: Anti-4E-BP1 antibody at 2 µg/mL.



Western Blot
Western blot analysis of 4E-BP1.
Load: 3T3 cell lysate.
Primary Antibody: Anti-4E-BP1 antibody at (A) 2.5µg/mL, (B) 5µg/mL, and (C) 10µg/mL.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.