

**Datasheet for 600-401-X52****4EBP1 Antibody****Overview**

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

**Product Details**

|                      |  |
|----------------------|--|
| <b>Background:</b>   | 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. |
| <b>Synonyms:</b>     | 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   |
| <b>Host Species:</b> | Rabbit   |
| <b>Clonality:</b>    | Polyclonal   |
| <b>Format:</b>       | IgG  |

**Target Details**

|                        |                    |
|------------------------|--------------------|
| <b>Gene Name:</b>      | EIF4EBP1           |
| <b>Reactivity:</b>     | Human, Mouse       |
| <b>Immunogen Type:</b> | Conjugated Peptide |

|                            |   |
|----------------------------|---|
| <b>Immunogen:</b>          | 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.     |
| <b>Purity/Specificity:</b> | Anti-4EBP1 Antibody was affinity purified from monospecific antiserum by immunoaffinity chromatography. Cross reactivity with 4EBP1 from other sources has not been determined. |
| <b>Relevant Links:</b>     | <ul style="list-style-type: none"><li>• <a href="#">UniProtKB - Q13541</a></li><li>• <a href="#">GeneID - 1978</a></li><li>• <a href="#">NCBI - NP_004086.1</a></li></ul>       |

## Application Details

|                             |   |
|-----------------------------|---|
| <b>Tested Applications:</b> | ELISA, IF, IHC, WB  |
| <b>Application Note:</b>    | 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. |
| <b>Assay Dilutions:</b>     | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.   |
| <b>ELISA:</b>               | 1:25,000 - 1:100,000  |
| <b>IF:</b>                  | 20 µg/mL  |
| <b>WB:</b>                  | 2.5 - 10 µg/mL  |

## Formulation

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

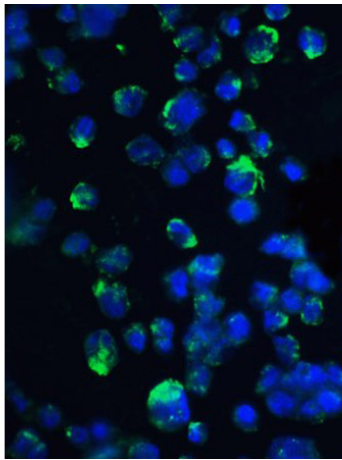
## Shipping & Handling

|                            |         |
|----------------------------|---------|
| <b>Shipping Condition:</b> | 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



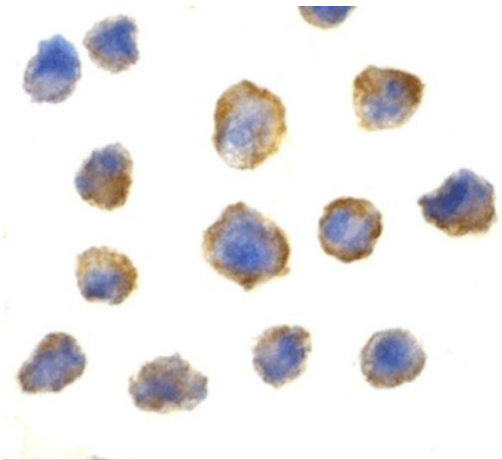
### Immunofluorescence Microscopy

Immunofluorescence of 4E-BP1.

Cell: 3T3 cells.

Primary Antibody: 4E-BP1 antibody at 20 µg/ml.

Staining: 4E-BP1 Antibody (green), DAPI (blue).

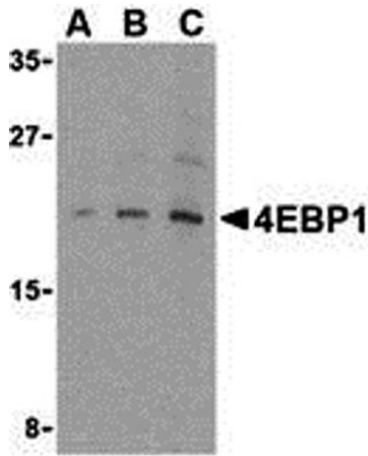


### Immunocytochemistry

Immunocytochemistry of 4E-BP1.

Cell: 3T3 cells.

Primary 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**

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