

## RUO DATA SHEET

### 4E-BP1

Concentrated Rabbit Monoclonal Antibody

#### Intended Use:

For Research Use Only (RUO)

Epitomics' Rabbit Monoclonal Anti-Human 4E-BP1, Clone EP352, is intended for use to qualitatively identify 4E-BP1 by light microscopy in sections of formalin-fixed, paraffin-embedded tissue using immunohistochemical detection methodology.

Catalog number	Description	Dilution
AC-0325RUO	0.1 ml, concentrated	1:100-1:200
AC-0325RUOB	0.5 ml, concentrated	1:100-1:200
AC-0325RUOC	1 ml, concentrated	1:100-1:200
AC-0325RUOBULK	2 ml or more, concentrated	1:100-1:200

<b>Immunogen:</b>	A synthetic peptide corresponding to residues of human 4E-BP1 protein
<b>Source:</b>	Rabbit Monoclonal Antibody
<b>Clone ID:</b>	EP352
<b>Isotype:</b>	Rabbit IgG
<b>Application:</b>	Immunohistochemistry for formalin-fixed paraffin-embedded tissue

#### Summary and Explanation:

The eukaryotic translation initiation factor 4E-binding protein 1 (4E-BP1), also known as eIF4E-BP1, is a translation repressor inhibiting protein synthesis that sequester the mRNA cap-binding protein eIF4E. The Akt/mTOR/4E-BP1 pathway is considered to be a central regulator of protein synthesis.

This protein is phosphorylated in response to various signals including UV irradiation and insulin signaling, resulting in its dissociation from eIF4E and activation of mRNA translation. Over expression of total and phosphorylated 4E-BP1 has been associated with tumor progression in carcinomas of the breast, ovary, prostate and liver.

#### Reagent Provided:

Antibody to 4E-BP1 is affinity purified and diluted in 10 mM phosphate buffered saline (PBS), pH 7.2 containing 1% bovine serum albumin (BSA) and 0.09% sodium azide (NaN<sub>3</sub>).

#### Storage and Stability:

Store at 2-8 °C. Do not use after expiration date provided on the vial. End user must validate any storage conditions other than those specified.

#### Procedures Recommended:

- 1. Pretreatment:** Epitope retrieval using Tris/EDTA buffer (catalog #: SP-0004) with a pressure cooker.
- 2. Endogenous peroxidase block:** Block for 10 minutes at room temperature using peroxidase solution (catalog #: SP-0002).
- 3. Protein block:** Block for 10 minutes at room temperature using blocking solution (catalog #: SP-0003).
- 4. Primary antibody:** Incubate for 30 minutes.
- 5. Detection:** Follow instructions from the selected detection system (EpiPrecision™, a Biotin Streptavidin-HRP Detection, catalog #: DK-0001, 0003, or EpiVision™, a Rabbit Polymer Detection, catalog # DK-0002, 0004).

The antibody dilution and protocol may vary depending on the specimen preparation and specific application. Optimal conditions should be determined by the individual laboratory.

#### Performance Characteristics:

This antibody gives cytoplasmic/nuclear staining in positive cells. The recommended positive controls are colon for normal tissue and colon cancer for abnormal tissue.

#### Limitations:

Immunohistochemistry is a complex process. Variation in tissue selection, tissue processing, antigen retrieval, peroxidase activity, detection systems and improper counterstaining may cause variation in results.

#### References:

1. Armengol G, et al.: *Cancer Res.* 2007;67(16):7551-5.
2. Cha YL, et al.: *PLoS One.* 2015;10(2):e0117493.
3. Martineau Y, et al.: *Oncogene.* 2013;32(6):671-7.
4. She QB, et al.: *Cancer Cell.* 2010;18(1):39-51.
5. Zhou X, et al.: *Clin Cancer Res.* 2004;10(20):6779-88.

102027 Rev. 00

