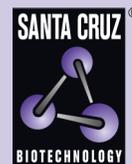


## 4E-T (B-3): sc-393788



The Power to Question

## BACKGROUND

The eukaryotic initiation complex eIF4F exists *in vitro* as a trimeric complex of eIF4G, eIF4E, and eIF4A. Together, the complex allows ribosome binding to mRNA by inducing the unwinding of mRNA secondary structures. eIF4E binds to the mRNA "cap" during an early step in the initiation of protein synthesis. eIF4E-transporter (4E-T) is a nucleocytoplasmic protein that facilitates the nuclear import of eIF4E by regulating the formation of a complex between the eIF4E and the importin  $\alpha\beta$  pathway. This interaction between 4E-T and eIF4E occurs through a conserved binding site. In addition to this binding site for eIF4E, 4E-T contains a bipartite nuclear localization signal and two leucine-rich nuclear export signals. The gene encoding for 4E-T maps to human chromosome 22q12.2.

## REFERENCES

1. Rychlik, W., et al. 1987. Amino acid sequence of the mRNA capbinding protein from human tissues. Proc. Natl. Acad. Sci. USA 84: 945-949.
2. Jaramillo, M., et al. 1991. RNA unwinding in translation: assembly of helicase complex intermediates comprising eukaryotic initiation factors eIF-4F and eIF-4B. Mol. Cell. Biol. 11: 5992-5997.
3. Scheper, G.C., et al. 1992. Eukaryotic initiation factors-4E and -4F stimulate 5' cap-dependent as well as internal initiation of protein synthesis. J. Biol. Chem. 267: 7269-7274.
4. Merrick, W.C. 1994. Eukaryotic protein synthesis: an *in vitro* analysis. Biochimie 76: 822-830.

## CHROMOSOMAL LOCATION

Genetic locus: EIF4ENIF1 (human) mapping to 22q12.2; Eif4enif1 (mouse) mapping to 11 A1.

## SOURCE

4E-T (B-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 31-66 near the N-terminus of 4E-T of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

4E-T (B-3) is available conjugated to agarose (sc-393788 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393788 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393788 PE), fluorescein (sc-393788 FITC), Alexa Fluor<sup>®</sup> 488 (sc-393788 AF488), Alexa Fluor<sup>®</sup> 546 (sc-393788 AF546), Alexa Fluor<sup>®</sup> 594 (sc-393788 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-393788 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-393788 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-393788 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393788 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

4E-T (B-3) is recommended for detection of 4E-T of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for 4E-T siRNA (h): sc-40523, 4E-T siRNA (m): sc-40524, 4E-T shRNA Plasmid (h): sc-40523-SH, 4E-T shRNA Plasmid (m): sc-40524-SH, 4E-T shRNA (h) Lentiviral Particles: sc-40523-V and 4E-T shRNA (m) Lentiviral Particles: sc-40524-V.

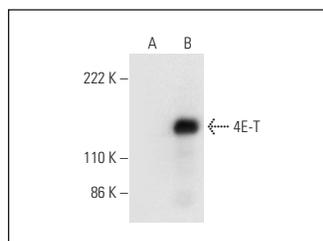
Molecular Weight of 4E-T: 140 kDa.

Positive Controls: 4E-T (h): 293T Lysate: sc-127869 or Jurkat whole cell lysate: sc-2204.

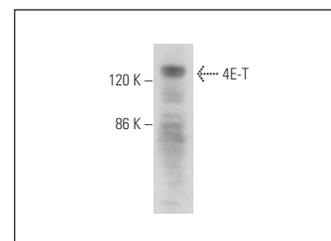
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



4E-T (B-3): sc-393788. Western blot analysis of 4E-T expression in non-transfected: sc-117752 (A) and human 4E-T transfected: sc-127869 (B) 293T whole cell lysates.



4E-T (B-3): sc-393788. Western blot analysis of 4E-T expression in Jurkat whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Liu, X.M., et al. 2021. Selective sorting of microRNAs into exosomes by phase-separated YBX1 condensates. Elife 10: e71982.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.