

eIF4E (A-10): sc-271480

BACKGROUND

The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. The eukaryotic initiation complex eIF4F exists *in vitro* as a trimeric complex of eIF4E, eIF4A and eIF4G. 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. eIF4A acts as an ATP-dependent RNA helicase. eIF4G acts as a bridge between eIF4E, eIF4A and the eIF3 complex.

CHROMOSOMAL LOCATION

Genetic locus: EIF4E (human) mapping to 4q23; Eif4e (mouse) mapping to 3 G3.

SOURCE

eIF4E (A-10) is a mouse monoclonal antibody raised against amino acids 1-217 representing full length eIF4E of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

eIF4E (A-10) is available conjugated to agarose (sc-271480 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271480 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271480 PE), fluorescein (sc-271480 FITC), Alexa Fluor® 488 (sc-271480 AF488), Alexa Fluor® 546 (sc-271480 AF546), Alexa Fluor® 594 (sc-271480 AF594) or Alexa Fluor® 647 (sc-271480 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271480 AF680) or Alexa Fluor® 790 (sc-271480 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

eIF4E (A-10) is recommended for detection of eIF4E of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 eIF4E siRNA (h): sc-35284, eIF4E siRNA (m): sc-35285, eIF4E shRNA Plasmid (h): sc-35284-SH, eIF4E shRNA Plasmid (m): sc-35285-SH, eIF4E shRNA (h) Lentiviral Particles: sc-35284-V and eIF4E shRNA (m) Lentiviral Particles: sc-35285-V.

Molecular Weight of eIF4E: 28 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, K-562 whole cell lysate: sc-2203 or MCF7 whole cell lysate: sc-2206.

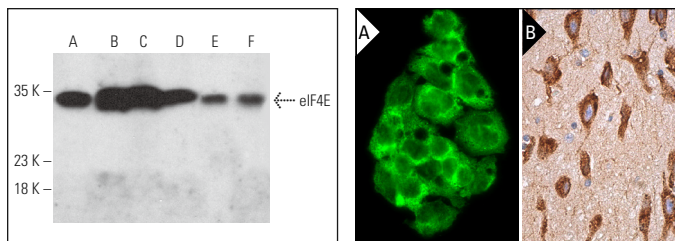
STORAGE

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.

DATA



eIF4E (A-10) HRP: sc-271480 HRP. Direct western blot analysis of eIF4E expression in NCI-H460 (A), KNRK (B), K-562 (C) and MCF7 (D) whole cell lysates and mouse stomach (E) and rat liver (F) tissue extracts.

eIF4E (A-10): sc-271480. Immunofluorescence staining of methanol-fixed Hep G2 cells showing cytoplasmic and nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells and glial cells (B).

SELECT PRODUCT CITATIONS

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- Jia, X., et al. 2019. Design, synthesis and biological evaluation of bromophenol-thiazolyhydrazones hybrids inhibiting the interaction of translation initiation factors eIF4E/eIF4G as multifunctional agents for cancer treatment. *Eur. J. Med. Chem.* 177: 153-170.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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