4E-BP1 (P-1): sc-9977

**BACKGROUND**

The translation of proteins from eukaryotic mRNA is initiated by the multisubunit complex elf-4F, which associates with the mRNA 5' cap structure. elf-4E, a component of elf-4F, is responsible for binding to the 5' cap structure and for the assembly of the elf-4F complex. The regulatory protein 4E-BP1, also referred to as PHAS-I, inhibits elf-4E function. Phosphorylation of 4E-BP1 by S6 kinase p70, MAP kinases or PKCs causes the disassociation of 4E-BP1 from elf-4E, promoting translation. A protein that is functionally related to 4E-BP1, designated 4E-BP2, also associates with elf-4E.

**CHROMOSOMAL LOCATION**

Genetic locus: EIF4EBP1 (human) mapping to 8p11.23; Elf4ebp1 (mouse) mapping to 8 A2.

**SOURCE**

4E-BP1 (P-1) is a mouse monoclonal antibody raised against full length 4E-BP1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

4E-BP1 (P-1) is available conjugated to agarose (sc-9977 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-9977 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-9977 PE), fluorescein (sc-9977 FITC), Alexa Fluor® 488 (sc-9977 AF488), Alexa Fluor® 546 (sc-9977 AF546), Alexa Fluor® 594 (sc-9977 AF594) or Alexa Fluor® 647 (sc-9977 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-9977 AF680) or Alexa Fluor® 790 (sc-9977 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

4E-BP1 (P-1) is recommended for detection of 4E-BP1 of mouse, rat, human and porcine origin by Western Blotting (starting dilution 1:200, 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 1:50-1:1500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:5000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for 4E-BP1 siRNA (h): sc-29594, 4E-BP1 siRNA (m): sc-29595, 4E-BP1 shRNA Plasmid (h): sc-29594-SH, 4E-BP1 shRNA Plasmid (m): sc-29595-SH, 4E-BP1 shRNA (h) Lentiviral Particles: sc-29594-V and 4E-BP1 shRNA (m) Lentiviral Particles: sc-29595-V.

Molecular Weight of 4E-BP1: 21 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, K-562 whole cell lysate: sc-2203 or KNRK whole cell lysate: sc-2214.

**RESEARCH USE**

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

**STORAGE**

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

**DATA**

**SELECT PRODUCT CITATIONS**


**PROTOCOLS**

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