4E-BP1 (11G12C11): sc-81149

**BACKGROUND**

The translation of proteins from eukaryotic mRNA is initiated by the multisu- 
unit 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 Bp11.23; Eif4ebp1 (mouse) 
mapping to 8 A2.

**SOURCE**

4E-BP1 (11G12C11) is a mouse monoclonal antibody raised against a 
recombinant protein corresponding to the N-terminal 118 amino acids 
of 4E-BP1 of human origin.

**PRODUCT**

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

4E-BP1 (11G12C11) is available conjugated to agarose (sc-81149 AC), 500 µg/ 
0.25 ml agarose in 1 ml, for IP; to HRP (sc-81149 HRP), 200 µg/ml, for 
WB, IHC(P) and ELISA; to either phycoerythrin (sc-81149 PE), fluorescein 
(sc-81149 FITC), Alexa Fluor® 488 (sc-81149 AF488), Alexa Fluor® 546 
(sc-81149 AF546), Alexa Fluor® 594 (sc-81149 AF594) or Alexa Fluor® 647 
(sc-81149 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either 
Alexa Fluor® 680 (sc-81149 AF680) or Alexa Fluor® 790 (sc-81149 AF790), 
200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

4E-BP1 (11G12C11) is recommended for detection of 4E-BP1 of mouse, rat 
and human 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 1:50-1:500) and immunohistochemistry (including paraffin- 
eMBEDDED sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for 4E-BP1 siRNA (h): sc-29584, 4E-BP1 
siRNA (m): sc-29585, 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: K-562 whole cell lysate: sc-2203, 4E-BP1 (h): 293T Lysate: 
sc-116590 or HL-60 whole cell lysate: sc-2209.

**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**

Western blot analysis of 4E-BP1 phosphorylation in non-transfected: sc-117752 (A-D), untransfected human 
4E-BP1 transfected: sc-116590 (B-E) and lambda protein phosphatase (sc-200312A) treated human 
4E-BP1 transfected: sc-116590 (C-F) 293T whole cell lysates. Antibodies tested include p-4E-BP1 (62Ser65), 
sc-295124 (A B C) and 4E-BP1 (11G12C11) sc-81149 (D E F)

4E-BP1 (11G12C11) sc-81149, Immunoperoxidase staining of formalin fixed, paraffin-embedded human 
pancreas tissue showing cytoplasmic staining of glandular cells.

**SELECT PRODUCT CITATIONS**

1. Laudanski, P., et al. 2009. Expression of selected tumor suppressor and 
oncogenes in endometrium of women with endometriosis. Hum. Reprod. 
24: 1880-1890.

and two separate rehabilitation regimens on gastrocnemius muscle protein 

3. Carnevale, J., et al. 2013. SYK regulates mTOR signaling in AML. Leukemia 
27: 2118-2128.


Endocrinol. Metab. 312: E243-E250.

tumour traits and circulating biomarkers in men with prostate cancer. Br. 

cells from glutamine starvation induced cell death by restoring Akt stability. 

**PROTOCOLS**

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