

eIF4G (C-11): sc-377288

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 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. eIF4A acts as an ATP-dependent RNA helicase. eIF4G acts as a bridge between eIF4E, eIF4A, and the eIF3 complex.

REFERENCES

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2. Reddy, N.S., et al. 1988. Isolation and mapping of a gene for protein synthesis initiation factor 4A and its expression during differentiation of murine erythroleukemia cells. *Gene* 70: 231-243.
3. Rozen, F., et al. 1990. Bidirectional RNA helicase activity of eucaryotic translation initiation factors 4A and 4F. *Mol. Cell. Biol.* 10: 1134-1144.
4. 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.
5. 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.
6. Yan, R., et al. 1992. Amino acid sequence of the human protein synthesis initiation factor eIF-4 γ . *J. Biol. Chem.* 267: 23226-23231.
7. Merrick, W.C. 1994. Eukaryotic protein synthesis: an *in vitro* analysis. *Biochimie* 76: 822-830.

CHROMOSOMAL LOCATION

Genetic locus: EIF4G1 (human) mapping to 3q27.1; Eif4g1 (mouse) mapping to 16 B1.

SOURCE

eIF4G (C-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 11-39 at the N-terminus of eIF4G of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-377288 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

eIF4G (C-11) is recommended for detection of eIF4G of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 eIF4G siRNA (h): sc-35286, eIF4G siRNA (m): sc-35287, eIF4G siRNA (r): sc-155983, eIF4G shRNA Plasmid (h): sc-35286-SH, eIF4G shRNA Plasmid (m): sc-35287-SH, eIF4G shRNA Plasmid (r): sc-155983-SH, eIF4G shRNA (h) Lentiviral Particles: sc-35286-V, eIF4G shRNA (m) Lentiviral Particles: sc-35287-V and eIF4G shRNA (r) Lentiviral Particles: sc-155983-V.

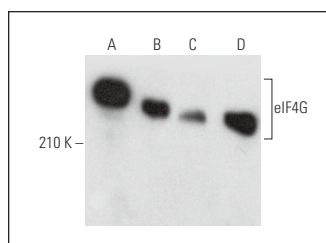
Molecular Weight of eIF4G: 200-250 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, NRK whole cell lysate: sc-364197 or Jurkat whole cell lysate: sc-2204.

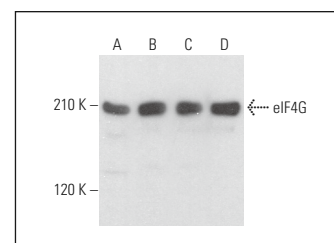
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



eIF4G (C-11): sc-377288. Western blot analysis of eIF4G expression in MCF7 (A), NIH/3T3 (B), PC-12 (C) and NRK (D) whole cell lysates.



eIF4G (C-11): sc-377288. Western blot analysis of eIF4G expression in Jurkat (A), U-251-MG (B), NIH/3T3 (C) and Neuro-2A (D) whole cell lysates.

RESEARCH USE

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



See **eIF4G (A-10): sc-133155** for eIF4G antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.