

eIF4G (N-20): sc-9601

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.

CHROMOSOMAL LOCATION

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

SOURCE

eIF4G (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of eIF4G of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-9601 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

eIF4G (N-20) is recommended for detection of eIF4G 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), 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).

eIF4G (N-20) is also recommended for detection of eIF4G in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for eIF4G siRNA (h): sc-35286, eIF4G siRNA (m): sc-35287, eIF4G shRNA Plasmid (h): sc-35286-SH, eIF4G shRNA Plasmid (m): sc-35287-SH, eIF4G shRNA (h) Lentiviral Particles: sc-35286-V and eIF4G shRNA (m) Lentiviral Particles: sc-35287-V.

Molecular Weight of eIF4G: 200-250 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, HeLa whole cell lysate: sc-2200 or KNRK whole cell lysate: sc-2214.

STORAGE

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

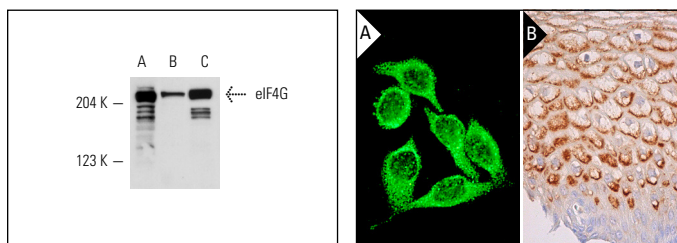
PROTOCOLS

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

RESEARCH USE

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

DATA



eIF4G (N-20): sc-9601. Western blot analysis of eIF4G expression in A-431 (A), HeLa (B) and KNRK (C) whole cell lysates.

eIF4G (N-20): sc-9601. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human vagina tissue showing cytoplasmic staining of squamous epithelial cells (B).

SELECT PRODUCT CITATIONS

- Otto, G.A., et al. 2004. The pathway of HCV IRES-mediated translation initiation. *Cell* 119: 369-380.
- Kim, S.H., et al. 2006. Fragile X mental retardation protein shifts between polyribosomes and stress granules after neuronal injury by arsenite stress or *in vivo* hippocampal electrode insertion. *J. Neurosci.* 26: 2413-2418.
- Tao, L., et al. 2006. Elemene displays anti-cancer ability on laryngeal cancer cells *in vitro* and *in vivo*. *Cancer Chemother. Pharmacol.* 58: 24-34.
- Dhar, D., et al. 2007. Translational control of the interferon regulatory factor 2 mRNA by IRES element. *Nucleic Acids Res.* 35: 5409-5421.
- Reboll, M.R., et al. 2007. NRF IRES activity is mediated by RNA binding protein JKTBP1 and a 14 nt RNA element. *RNA* 13: 1328-1340.
- Prabhu, S., et al. 2007. A novel mechanism for Bcr-Abl action: Bcr-Abl-mediated induction of the eIF4F translation initiation complex and mRNA translation. *Oncogene* 26: 1188-1200.
- Paronetto, M.P., et al. 2008. Dynamic expression of the RNA-binding protein Sam68 during mouse pre-implantation development. *Gene Expr. Patterns* 8: 311-322.
- Geibler, V., et al. 2013. The RNA helicase Ddx5/p68 binds to hUpf3 and enhances NMD of Ddx17/p72 and Smg5 mRNA. *Nucleic Acids Res.* 41: 7875-7888.



Try **eIF4G (A-10): sc-133155** or **eIF4G (H-2): sc-373892**, our highly recommended monoclonal alternatives to eIF4G (N-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **eIF4G (A-10): sc-133155**.