

eIF4G Antibody

✓ 100 µl
(10 western blots)

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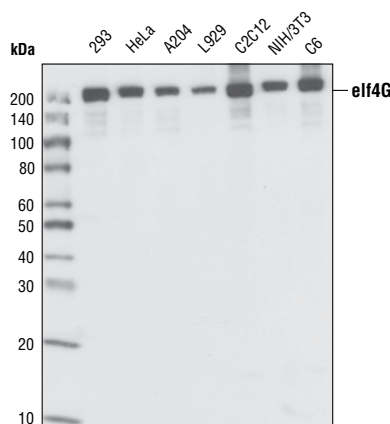
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IHC-P, IF-IC, F Endogenous	H, M, R, Mk	220 kDa	Rabbit**

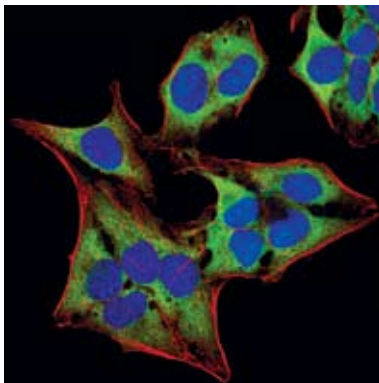
Background: The initiation of translation is an important biological event and a variety of factors contribute to this process. Members of the eIF4 translation initiation factor family bind to the 5' m⁷GTP mRNA cap and unwind the mRNA secondary structure (1,2). The amino-terminal portion of eIF4G physically associates with eIF4E to stimulate the binding of eIF4E to the mRNA cap structure (3). eIF4G also interacts with eIF3 and eIF4A and serves as an adaptor molecule in the eIF4 complex (4). Moreover, eIF4G plays a role in internal ribosomal entry site (IRES)-mediated initiation of translation (5,6). The eIF4G family includes eIF4G1 (eIF4GI), eIF4G2 (p97, DAP5 or NAT1), and eIF4G3 (eIF4GII) (7). These factors share a homologous sequence that provides for interaction with initiation factors eIF3 and eIF4A. Both eIF4G1 and eIF4G3 are involved in cap-dependent translation, while eIF4G2 plays a role in IRES-mediated translation of some genes during cell stress (7,8).

Specificity/Sensitivity: eIF4G Antibody detects endogenous levels of total eIF4G protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to a sequence of human eIF4G. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from various cell lines using eIF4G Antibody.



Confocal immunofluorescent analysis of HeLa cells, using eIF4G Antibody (green, left) compared to an isotype control (right). Actin filaments have been labeled with Alexa Fluor® 555 phalloidin (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

Entrez-Gene ID #1981
Swiss-Prot Acc. #Q04637

Storage: Supplied in 10mM HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

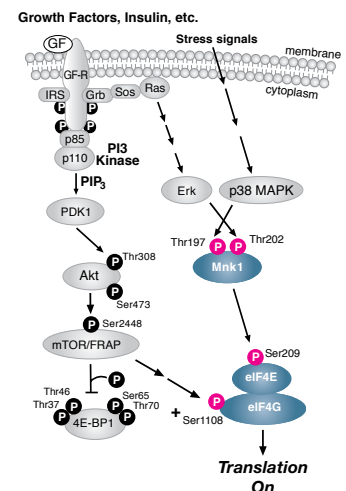
Western blotting	1:1000
Immunohistochemistry (Paraffin)	1:100
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Immunofluorescence (IF-IC)	1:200
Flow Cytometry	1:50

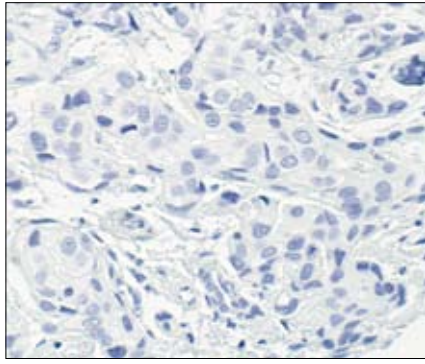
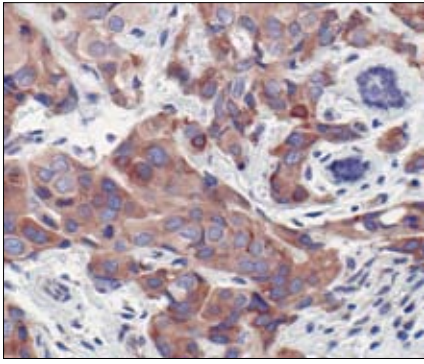
For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

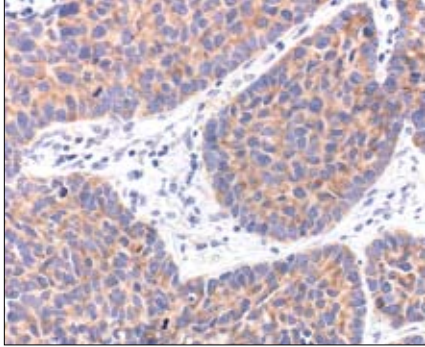
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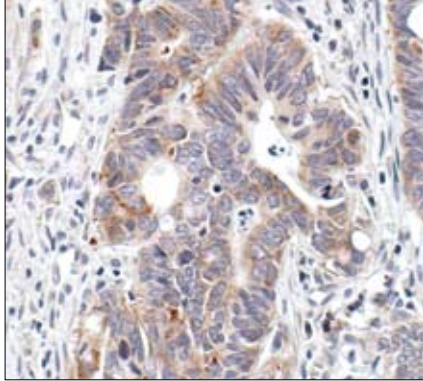




Immunohistochemical analysis of paraffin-embedded human breast carcinoma, using eIF4G Antibody in the presence of control peptide (left) or eIF4G blocking peptide #1003 (right).



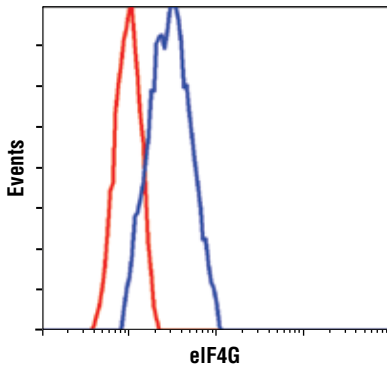
Immunohistochemical analysis of paraffin-embedded human lung carcinoma, showing cytoplasmic localization, using eIF4G Antibody.



Immunohistochemical analysis of paraffin-embedded human colon carcinoma, using eIF4G Antibody.

Background References:

- (1) Yan, R. and Rhoads, R.E. (1995) *Genomics* 26, 394-398.
- (2) Morley, S.J. et al. (1997) *RNA* 3, 1085-1104.
- (3) Haghghat, A. and Sonenberg, N. (1997) *J. Biol. Chem.* 272, 21677-21680.
- (4) De Gregorio, E. et al. (1998) *RNA* 4, 828-836.
- (5) Ohlmann, T. et al. (1996) *EMBO J.* 15, 1371-1382.
- (6) Borman, A.M. and Kean, K.M. (1997) *Virology* 237, 129-136.
- (7) Henis-Korenblit, S. et al. (2002) *Proc. Natl. Acad. Sci. USA* 99, 5400-5405.
- (8) Nevins, T.A. et al. (2003) *J. Biol. Chem.* 278, 3572-3579.



Flow cytometric analysis of HeLa cells, using eIF4G Antibody (blue) compared to a nonspecific negative control antibody (red).