

# Phospho-eIF4G (Ser1108) Antibody

✓ 100 µl  
(10 western blots)

**Orders** ■ 877-616-CELL (2355)  
orders@cellsignal.com  
**Support** ■ 877-678-TECH (8324)  
info@cellsignal.com  
**Web** ■ www.cellsignal.com

rev. 03/17/10

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, IP, IF-IC Endogenous	H, M, R, Mk, Hm, B	220 kDa	Rabbit**

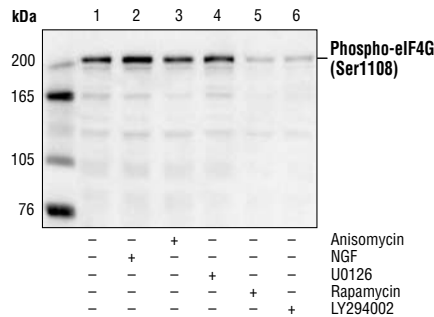
**Background:** Eukaryotic initiation factor 4E (eIF4E) binds to the mRNA cap structure, thereby mediating the initiation of translation (1,2). eIF4E interacts with eIF4G, which serves as a scaffold protein for the assembly of eIF4E and eIF4A to form the eIF4F complex (2). eIF4B is thought to assist the eIF4F complex in translation initiation. Upon activation by mitogenic and/or stress stimuli mediated by Erk and p38 MAPK, Mnk1 has been shown to phosphorylate eIF4E at Ser209 *in vivo* (3,4). Two Erk and p38 MAPK phosphorylation sites have been identified in mouse Mnk1, Thr197 and Thr202, which are essential for Mnk1 kinase activity (3). The carboxy-terminal region of eIF4G also contains serum-stimulated phosphorylation sites, including Ser1108, Ser1148 and Ser1192 (5). It is known that their phosphorylation is blocked by the PI3 kinase inhibitor LY294002 and by the FRAP/mTOR inhibitor rapamycin.

**Specificity/Sensitivity:** Phospho-eIF4G (Ser1108) Antibody detects eIF4GI only when phosphorylated at Ser1108. It does not cross-react with nonphosphorylated eIF4GI or p97.

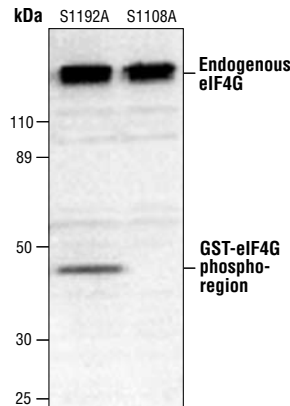
**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser1108 of human eIF4GI. Antibodies are purified by protein A and peptide affinity chromatography.

**Background References:**

- (1) Sonenberg, N. et al. (1978) *Proc. Natl. Acad. Sci. USA* 75, 4843–4847.
- (2) Gingras, A.C. et al. (1999) *Annu. Rev. Biochem.* 68, 913–963.
- (3) Waskiewicz, A. et al. (1999) *Mol. Cell. Biol.* 19, 1871–1880.
- (4) Pyronnet, S. et al. (1999) *EMBO J.* 18, 270–279.
- (5) Raught, B. et al. (2000) *EMBO J.* 19, 434–444.



Western blot analysis of extracts from PC12 cells, untreated (lane 1), NGF-treated (10 ng/ml) (lane 2), anisomycin-treated (25 µM) (lane 3), U0126-treated #9903 (10 µM) (lane 4), Rapamycin-treated #9904 (100 nM) (lane 5) or LY294002-treated #9901 (25 µM) (lane 6), using Phospho-eIF4G (Ser1108) Antibody.



Western blot analysis of extracts from 293 cells expressing GST-eIF4G Ser1192Ala or GST-eIF4G Ser1108Ala mutant protein, using Phospho-eIF4G (Ser1108) Antibody. (Provided by Brian Raught, McGill University, Montreal, Québec.)

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

**Storage:** Supplied in 10 mM sodium 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.

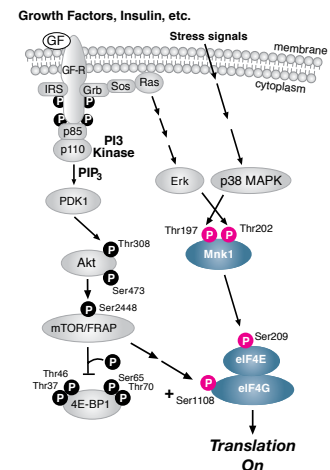
\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western Blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (IF-IC)	1:300

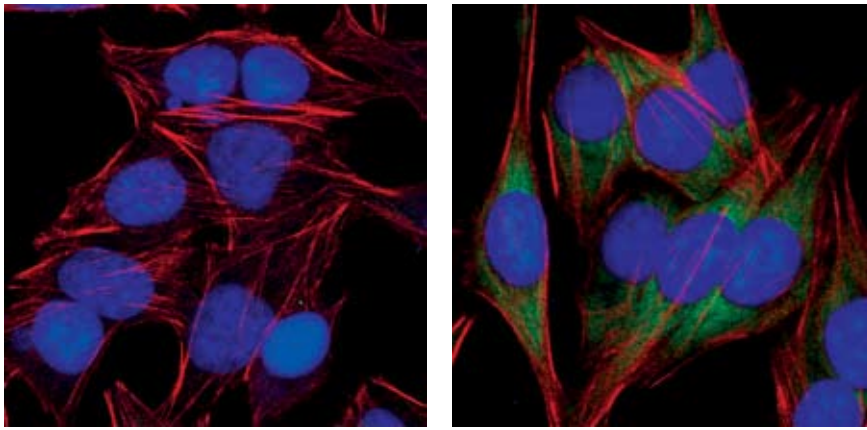
For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.



**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.



*Confocal immunofluorescent analysis of HeLa cells either rapamycin-treated (left) or serum-treated (right), using Phospho-eIF4G (Ser1108) Antibody (green). Actin filaments have been labeled with Alexa Fluor® 555 phalloidin (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).*