Revision 1

Phospho-eIF4G (Ser1108) Antibody

#2441 Store at -20C

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IF-IC	H M R Hm Mk B	Endogenous	220	Rabbit	#Q04637	1981

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (Immunocytochemistry)	1:600

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.

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

Eukaryotic initiation factor 4E (eIF4E) binds to the mRNA cap structure to mediate the initiation of translation (1,2). eIF4E interacts with eIF4G, a scaffold protein that promotes assembly of eIF4E and eIF4A into 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 phosphorylates eIF4E at Ser209 *in vivo* (3,4). Two Erk and p38 MAPK phosphorylation sites in mouse Mnk1 (Thr197 and Thr202) 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). Phosphorylation at these sites is blocked by the PI3 kinase inhibitor LY294002 and by the FRAP/mTOR inhibitor rapamycin.

Background References

1. Sonenberg, N. et al. (1978) *Proc. Natl. Acad. Sci. USA* 75, 4843-47.
2. Gingras, A.C. et al. (1999) *Annu. Rev. Biochem.* 68, 913-63.
3. Waskiewicz, A. et al. (1999) *Mol. Cell. Biol.* 19, 1871-80.
4. Pyronnet, S. et al. (1999) *EMBO J.* 18, 270-9.
5. Raught, B. et al. (2000) *EMBO J.* 19, 434-44.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Hm:** Hamster **Mk:** Monkey **B:** Bovine

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