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#2067

## eIF4E (C46H6) Rabbit mAb

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IHC-P	H M R Mk	Endogenous	25	Rabbit IgG	#P06730	1977

### Product Usage Information

For a carrier free (BSA and azide free) version of this product see product # 32042

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:800 - 1:3200

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

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### Specificity/Sensitivity

eIF4E (C46H6) Rabbit mAb detects endogenous levels of total eIF4E protein. This antibody does not cross-react with 4EHP protein.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to human eIF4E protein.

### 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 **IHC-P:** Immunohistochemistry (Paraffin)

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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