

#9742 Store at -20C

eIF4E Antibody



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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IHC-P	H M R Mk Mi Z	Endogenous	25	Rabbit	#P06730	1977

Product Usage Information	Application Western Blotting Immunohistochemistry (Paraffin)	Dilution 1:1000 1:100
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	eIF4E Antibody detects endogenous levels of total eIF4E protein. The antibody does not cross-react with other proteins.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser209 of eIF4E. 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 <i>in vivo</i> (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) <i>Proc. Natl. Acad. Sci. USA</i> 75, 4843-47. 2. Gingras, A.C. et al. (1999) <i>Annu. Rev. Biochem.</i> 68, 913-63. 3. Waskiewicz, A. et al. (1999) <i>Mol. Cell. Biol.</i> 19, 1871-80. 4. Pyronnet, S. et al. (1999) <i>EMBO J.</i> 18, 270-9. 5. Raught, B. et al. (2000) <i>EMBO J.</i> 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	WB: Western Blotting IHC-P: Immunohistochemistry (Paraffin)
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus 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 GP: Guinea Pig Rab: rabbit All: all species expected
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