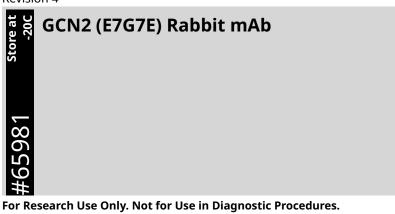
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Applications:Reactivity:W, IP, IF-ICH	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 220	<b>Source/Isotype:</b> Rabbit IgG	UniProt ID: #Q9P2K8	<b>Entrez-Gene Id:</b> 440275		
Product Usage Information					<b>Dilution</b> 1:1000 1:100 1:6400 - 1:12800		
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycero 0.02% sodium azide. Store at –20°C. <i>Do not aliquot the antibody.</i>						
	For a carrier free (BSA and azide free) version of this product see product #96377.						
Specificity/Sensitivity	GCN2 (E7G7E) Rabbit	GCN2 (E7G7E) Rabbit mAb recognizes endogenous levels of total GCN2 protein.					
Source / Purification		Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human GCN2 protein.					
Background	Phosphorylation of the eukaryotic initiation factor 2 (eIF2) alpha subunit is a well-documented mechanism of downregulating protein synthesis under a variety of stress conditions. Kinases activated by viral infection (PKR), endoplasmic reticulum stress (PERK/PEK), amino acid deprivation (GCN2), and hemin deficiency (HRI) can phosphorylate the eIF2 alpha subunit (1,2). GCN2 is also required for UV light-induced translation inhibition, and <i>in vivo</i> phosphorylation of murine GCN2 at Thr898 is induced by both UV irradiation and by leucine deprivation (3). UV-induced activation of NF-KB also requires GCN2, which may act simply by preventing translation of IKB-alpha to replace pools that have been ubiquitinated and degraded (4). Interestingly, proteasome inhibitors (MG132 and ALLN) activate the GCN2/eIF2alpha pathway, suggesting a pivotal role for this kinase in stress response and ubiquitinmediated signaling (5). <i>In vitro</i> autophosphorylation of yeast GCN2 within its activation loop at Thr882 and Thr898 and Thr903 in mouse) has also been reported (6).						
Background References	1. Kaufman, R.J. (1999) <i>Genes Dev</i> 13, 1211-33. 2. Sheikh, M.S. and Fornace, A.J. (1999) <i>Oncogene</i> 18, 6121-8. 3. Deng, J. et al. (2002) <i>Curr Biol</i> 12, 1279-86. 4. Jiang, H.Y. and Wek, R.C. (2005) <i>Biochem J</i> 385, 371-80. 5. Jiang, H.Y. and Wek, R.C. (2005) <i>J Biol Chem</i> 280, 14189-202. 6. Garcia-Barrio, M. et al. (2002) <i>J Biol Chem</i> 277, 30675-83.						
Species Reactivity	Species reactivity is de	etermined by testin	g in at least one approve	ed application (e.g.,	western blot).		
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.						
Applications Key	W: Western Blotting I	W: Western Blotting IP: Immunoprecipitation IF-IC: Immunofluorescence (Immunocytochemistry)					
Cross-Reactivity Key	H: Human						
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