

#3398 Store at -20C

Phospho-eIF2 α (Ser51) (D9G8) XP[®] Rabbit mAb


Cell Signaling
TECHNOLOGY[®]
Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications: WB, IP, IHC-P	Reactivity: H M R Mk Dm	Sensitivity: Endogenous	MW (kDa): 38	Source/Isotype: Rabbit IgG	UniProt ID: #P05198	Entrez-Gene Id: 1965
---------------------------------------	-----------------------------------	-----------------------------------	------------------------	--------------------------------------	-------------------------------	--------------------------------

Product Usage Information	Application Western Blotting Immunoprecipitation Immunohistochemistry (Paraffin)	Dilution 1:1000 1:100 1:50 - 1:200
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody. For a carrier free (BSA and azide free) version of this product see product #95797.	
Specificity / Sensitivity	Phospho-eIF2 α (Ser51) (D9G8) XP [®] Rabbit mAb detects endogenous eIF2 α only when phosphorylated at Ser51. The antibody does not recognize eIF2 α phosphorylated at other sites. Human eIF2 α residue Ser52 historically has been referenced as Ser51.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser51 of human eIF2 α .	
Background	Phosphorylation of the eukaryotic initiation factor 2 (eIF2) α subunit is a well-documented mechanism to downregulate protein synthesis under a variety of stress conditions. eIF2 binds GTP and Met-tRNA ⁱ and transfers Met-tRNA to the 40S subunit to form the 43S preinitiation complex (1,2). eIF2 promotes a new round of translation initiation by exchanging GDP for GTP, a reaction catalyzed by eIF2B (1,2). Kinases that are activated by viral infection (PKR), endoplasmic reticulum stress (PERK/PEK), amino acid deprivation (GCN2), or heme deficiency (HRI) can phosphorylate the α subunit of eIF2 (3,4). This phosphorylation stabilizes the eIF2-GDP-eIF2B complex and inhibits the turnover of eIF2B. Induction of PKR by IFN- γ and TNF- α induces potent phosphorylation of eIF2 α at Ser51 (5,6).	
Background References	1. Kimball, S.R. (1999) <i>Int. J. Biochem. Cell Biol.</i> 31, 25-29. 2. de Haro, C. et al. (1996) <i>FASEB J.</i> 10, 1378-87. 3. Kaufman, R.J. (1999) <i>Genes Dev.</i> 13, 1211-33. 4. Sheikh, M.S. and Fornace Jr., A.J. (1999) <i>Oncogene</i> 18, 6121-8. 5. Cheshire, J.L. et al. (1999) <i>J. Biol. Chem.</i> 274, 4801-6. 6. Zamanian-Daryoush, M. et al. (2000) <i>Mol. Cell. Biol.</i> 20, 1278-90.	

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 IP: Immunoprecipitation 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
Trademarks and Patents	Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc. XP is a registered trademark of Cell Signaling Technology, Inc. All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.
Limited Uses	

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.