

Phospho-eIF2 α (Ser51) Blocking Peptide

✓ 100 μ g
(100 sections)



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For Research Use Only. Not For Use In Diagnostic Procedures.

Description: This peptide is used to block Phospho-eIF2 α (Ser51) (119A11) Rabbit mAb (#3597).

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).

Quality Control: The quality of the peptide was evaluated by reverse-phase HPLC and by mass spectrometry. The peptide blocks Phospho-eIF2 α (Ser51) (119A11) Rabbit mAb #3597 signal in peptide dot blot.

Directions for Use: Use as a blocking reagent to evaluate the specificity of antibody reactivity in peptide dot blot protocols. Recommended antibody dilution can be found on the Phospho-eIF2 α (Ser51) (119A11) Rabbit mAb #3597 data sheet.

Entrez Gene ID #1965

UniProt ID #P05198

Storage: Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA, 5% glycerol, and 1% DMSO. Store at -20°C.

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

Background References:

- (1) Kimball, S.R. (1999) *Int. J. Biochem. Cell Biol.* 31, 25–29.
- (2) De Haro, C. et al. (1996) *FASEB J.* 10, 1378–1387.
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- (5) Cheshire, J.L. et al. (1999) *J. Biol. Chem.* 274, 4801–4806.
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