

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Phospho-eIF2 $\alpha$ (S52) in ELISAs and Western blots.
<b>Source</b>	Monoclonal Rat IgG <sub>2B</sub> Clone # 849159
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Phosphopeptide containing the human eIF2 $\alpha$ S52 site Accession # P05198
<b>Conjugate</b>	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
<b>Formulation</b>	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

**Shipping** The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

#### BACKGROUND

Eukaryotic translation initiation factor 2 alpha subunit (eIF2 $\alpha$ ) is a subunit of the eIF2 protein, an important regulator of translation initiation. Phosphorylation of eIF2 $\alpha$  on Ser 52 increases the affinity of eIF2 $\alpha$  for eIF2B, a guanine nucleotide exchange factor needed for the recycling of eIF2-GDP to eIF2-GTP. Reduction of eIF2-GTP levels leads to the suppression of the overall rate of protein synthesis. Heme-regulated inhibitor (HRI), ER-resident protein kinase PERK, dsRNA activated protein kinase PKR, and the homologue of the *S. cerevisiae* protein kinase GCN2 are all eIF2 $\alpha$  kinases.

#### PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.