

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human GCN2 in direct ELISAs.                                                                                                                                                                                                                                        |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2B</sub> Clone # 708210                                                                                                                                                                                                                           |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human GCN2<br>Arg22-Lys139<br>Accession # Q9P2K8                                                                                                                                                                                        |
| <b>Conjugate</b>          | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

GCN2, also known as EIF2AK4, is a widely expressed 190 kDa ribosome-associated Ser/Thr kinase that plays an important role in the control of protein translation. In response to amino acid deprivation or UV irradiation, GCN2 phosphorylates the alpha subunit of eukaryotic initiation factor 2 (eIF2α) at Ser51 and induces a delay in entry to S phase of the cell cycle. Increased GCN2 activity in solid tumors enhances the production of amino acids and contributes to tumor cell survival in conditions of nutrient deprivation. GCN2 contains an RWD domain (aa 21-134), a pseudo-kinase domain (aa 296-539), a catalytic domain (aa 590-1001), and a histidyl tRNA synthase-like domain (aa 1022-1493) followed by a C-terminal ribosome interacting region. Alternate splicing generates an isoform with a short deletion in the kinase domain and an isoform that is truncated at the N-terminal end of the kinase domain. Within aa 22-139, human GCN2 shares 91% aa sequence identity with mouse and rat GCN2.

## PRODUCT SPECIFIC NOTICES

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