Human GCN2 Alexa Fluor® 594-conjugated Antibody

Antigen Affinity-purified Polyclonal Rabbit IgG
Catalog Number: AF7605T
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human GCN2 when phosphorylated at T899 in Western blots.
Source	Polyclonal Rabbit IgG
Purification	Antigen Affinity-purified
Immunogen	Phosphopeptide containing human GCN2 T899 site
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	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

GCN2 (General Control Non-derepressible 2-like protein; also eIF2a kinase 4) is a 190-200 kDa member of the GCN2 subfamily, Ser/Thr kinase family, protein kinase superfamily of proteins It is widely expressed, being found in skeletal muscle cells, fibroblasts, hepatocytes and neurons. GCN2 is a key regulator of metabolism under nutrient deprivation. In particular, when essential amino acids (aa) are limiting, tRNAs exist that are unbound to amino acids. These “uncharged” tRNAs will bind to GCN2, activating the molecule. Through GCN2-mediated phosphorylation of eIF2a, promotes GCN4 synthesis, with subsequent activation of amino acid synthesizing enzymes, and a downregulation of lipid storage. Human GCN2 is 1649 aa in length. It possesses one RWD domain (aa 25-137), two protein kinase domains (aa 296-539 and 590-1001) and an extended His-RS-like region (aa 1021-1492). There are at least three utilized Ser/Thr phosphorylation sites. Two isoform variants exist. One shows a deletion of aa 774-801, while another contains a nine aa substitution for aa 608-1649. Over aa 22-139, human GCN2 shares 91% aa sequence identity with mouse GCN2.

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