



Gcn2 (yK-20): sc-23660

BACKGROUND

When starved for amino acids, *Saccharomyces cerevisiae* accumulates uncharged tRNAs to activate its sole eIF2 α kinase, Gcn2. Gcn2 is essential for activation of the general amino acid control pathway in yeast when one or more amino acids become limiting for growth. Gcn2 stimulates the translation of transcriptional activator Gcn4 by phosphorylating eIF2 α in response to amino acid starvation. Phosphorylated eIF2 acts as a dominant inhibitor of the guanine nucleotide exchange factor eIF2B and prevents the recycling of eIF2 between successive rounds of protein synthesis. Extensive phosphorylation of eIF2 α and strong inhibition of eIF2B activity can result in the down-regulation of the overall rate of protein synthesis. eIF2 α phosphorylation correlates with phosphorylation of the mammalian homolog of yeast Gcn2 eIF2 α kinase. Gcn2's function in mammals is unknown, but must differ, since mammals, unlike yeast, can synthesize only half of the standard 20 amino acids.

REFERENCES

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SOURCE

Gcn2 (yK-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Gcn2 of *Saccharomyces cerevisiae* origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-23660 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Gcn2 (yK-20) is recommended for detection of Gcn2 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.