

Anti-Phospho-GCN2 (T899) Antibody [JE00-51]

HA722249



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB
Molecular Wt:	Predicted band size: 187 kDa
Clone number:	JE00-51

Description: The family of stress-responsive protein kinases include HRI (heme-regulated inhibitor or EIF2AK1), PKR (EIF2AK2 or TIK), PERK (EIF2AK3) and GCN2 (EIF2AK4). These proteins phosphorylate the eukaryotic translation initiation factor 2 α (eIF2 α) on Ser 51 to regulate general and gene-specific protein synthesis. Phosphorylated eIF2 α acts as an inhibitor of its guanine nucleotide exchange factor eIF2B. GCN2, a unique eIF2 α kinase, exists in all eukaryotes from yeast to mammals. In mammals, expression of GCN2 is highest in liver and brain tissues. GCN2 primarily initiates the phosphorylation of eIF2 α in response to UV, but has been shown to increase phosphorylation activity in response to serum starvation. Also, substitution of Asp 83 for Ala on eIF2 α results in impaired phosphorylation by GCN2 and PKR, suggesting a contribution of remote residues to kinase-substrate recognition.

Immunogen: Synthetic phosphopeptide corresponding to residues surrounding Thr899 of Human GCN2.

Positive control: HeLa treated with 100nM Calyculin A for 30 minutes cell lysate, Neuro-2a treated with 100nM Calyculin A for 30 minutes cell lysate, C6 treated with 100ng/mL Calyculin A for 1 hour cell lysate.

Subcellular location: Cytoplasm.

Database links: SwissProt: Q9P2K8 Human | Q9QZ05 Mouse
Entrez Gene: 114859 Rat

Recommended Dilutions:
WB 1:1,000-1:2,000

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C long term.

Purity: Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

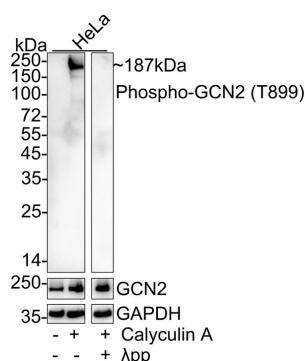


Fig1: Western blot analysis of Phospho-GCN2 (T899) on different lysates with Rabbit anti-Phospho-GCN2 (T899) antibody (HA722249) at 1/1,000 dilution and pan GCN2 antibody (ET1704-68) at 1/1,000 dilution.

Lane 1: HeLa cell lysate (25 µg/Lane)

Lane 2: HeLa treated with 100nM Calyculin A for 30 minutes cell lysate (25 µg/Lane)

Lane 3: HeLa treated with 100nM Calyculin A for 30 minutes cell lysate, then the membrane treated with λpp for 1 hour (25 µg/Lane)

Predicted band size: 187 kDa

Observed band size: 187 kDa

Exposure time: 3 minutes; ECL: K1802;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA722249) at 1/1,000 dilution and pan GCN2 antibody (ET1704-68) at 1/1,000 dilution were used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

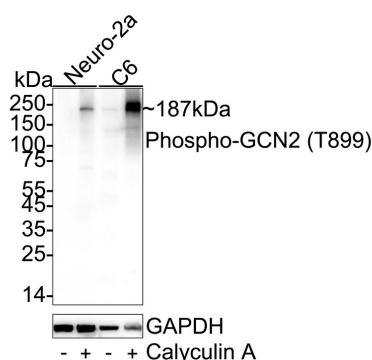


Fig2: Western blot analysis of Phospho-GCN2 (T899) on different lysates with Rabbit anti-Phospho-GCN2 (T899) antibody (HA722249) at 1/2,000 dilution.

Lane 1: Neuro-2a cell lysate (20 µg/Lane)

Lane 2: Neuro-2a treated with 100nM Calyculin A for 30 minutes cell lysate (20 µg/Lane)

Lane 1: C6 cell lysate (20 µg/Lane)

Lane 2: C6 treated with 100ng/mL Calyculin A for 1 hour cell lysate (20 µg/Lane)

Predicted band size: 187 kDa

Observed band size: 187 kDa

Exposure time: 59 seconds; ECL: K1802;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA722249) at 1/2,000 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

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Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Li C et al. Amino acid catabolism regulates hematopoietic stem cell proteostasis via a GCN2-eIF2 α axis. *Cell Stem Cell*. 2022 Jul
2. Missiaen R et al. GCN2 inhibition sensitizes arginine-deprived hepatocellular carcinoma cells to senolytic treatment. *Cell Metab*. 2022 Aug

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