

## Anti-GCN2 Antibody (7U574)

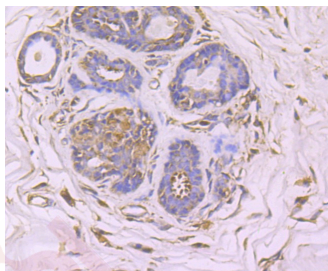
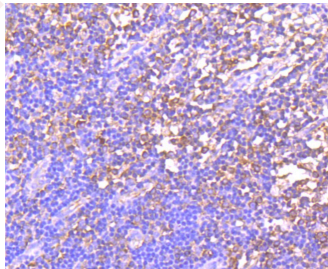
### Product Details

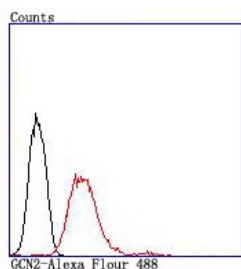
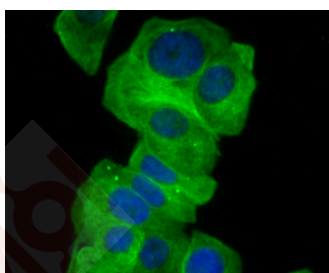
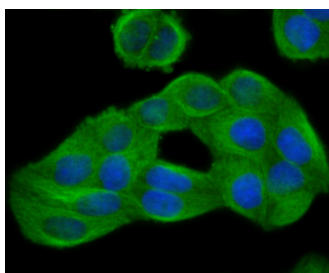
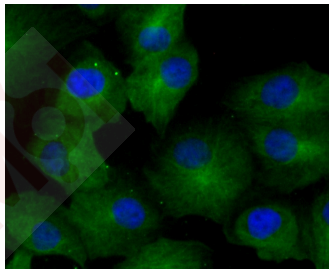
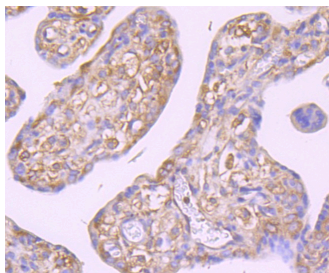
Ig Type:	IgG
Reactivity:	Human
Conjugation:	Unconjugated
Molecular Weight:	Theoretical: 187 kDa.
Clone:	7U574
Purification:	ProA affinity purified

### Applications

#### Verified Activity:

1. Immunohistochemical analysis of paraffin-embedded human tonsil tissue using anti-GCN2 antibody. Counter stained with hematoxylin.
2. Immunohistochemical analysis of paraffin-embedded human breast cancer tissue using anti-GCN2 antibody. Counter stained with hematoxylin.
3. Immunohistochemical analysis of paraffin-embedded human placenta tissue using anti-GCN2 antibody. Counter stained with hematoxylin.
4. ICC staining GCN2 in A549 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.
5. ICC staining GCN2 in Hela cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.
6. ICC staining GCN2 in MCF-7 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.
7. Flow cytometric analysis of MCF-7 cells with GCN2 antibody at 1/100 dilution (red) compared with an unlabelled control (cells without incubation with primary antibody; black).





Application: FCM, ICC, IHC, WB

Recommended WB: 1:500-1000; IHC: 1:50-200; ICC: 1:50-200; FCM: 1:50-100

### Properties

Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.

Shipping: Shipping with blue ice.

### Antigen Details

Immunogen:	Recombinant Protein
Uniprot ID:	Q9P2K8
Synonyms:	GCN2;EIF2AK4;E2AK4;MGCN2;Eukaryotic Translation Initiation Factor 2 alpha kinase 4; Eukaryotic Translation Initiation Factor 2-alpha kinase 4;GCN2-like protein;GCN2 eIF2alpha kinase;KIAA1338

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### Research Background

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 $\alpha$  (eIF2 $\alpha$ ) on Ser 51 to regulate general and gene-specific protein synthesis. Phosphorylated eIF2 $\alpha$  acts as an inhibitor of its guanine nucleotide exchange factor eIF2B. GCN2, a unique eIF2 $\alpha$  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 $\alpha$  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 $\alpha$  results in impaired phosphorylation by GCN2 and PKR, suggesting a contribution of remote residues to kinase-substrate recognition.

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