Data Sheet (Cat.No.TMAC-03210)

Anti-Phospho-eIF2α (Ser51) Antibody (1F908)

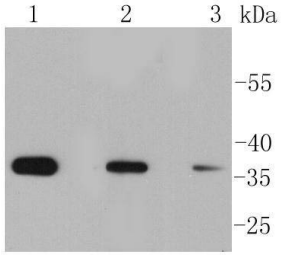
Product Details

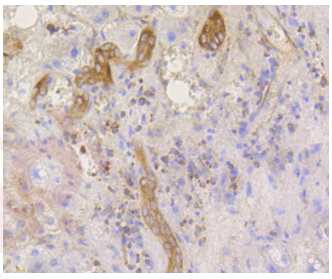
Ig Type:	IgG
Reactivity:	Human,Mouse,Rat
Conjugation:	Unconjugated
Molecular Weight:	Theoretical: 36 kDa.
Clone:	1F908
Purification:	ProA affinity purified

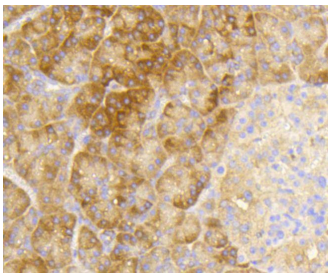
Applications

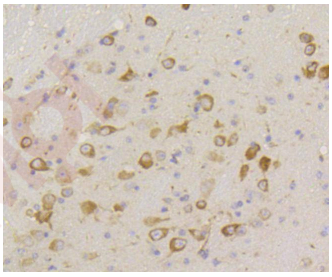
Verified Activity:

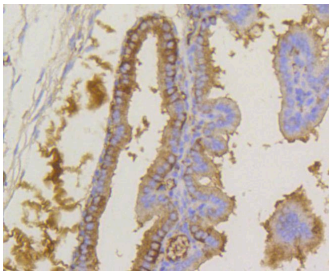
1. Western blot analysis of Phospho-eIF-2a (S51) on different lysates using anti-Phospho-eIF-2a (S51) antibody at 1/1,000 dilution. Positive control: Lane 1: Hela, Lane 2: HUVEC, Lane 3: PC12.
2. Immunohistochemical analysis of paraffin-embedded human liver tissue using anti-Phospho-eIF-2a (S51) antibody. Counter stained with hematoxylin.
3. Immunohistochemical analysis of paraffin-embedded human pancreas tissue using anti-Phospho-eIF-2a (S51) antibody. Counter stained with hematoxylin.
4. Immunohistochemical analysis of paraffin-embedded mouse brain tissue using anti-Phospho-eIF-2a (S51) antibody. Counter stained with hematoxylin.
5. Immunohistochemical analysis of paraffin-embedded mouse placenta tissue using anti-Phospho-eIF-2a (S51) antibody. Counter stained with hematoxylin.
6. Immunohistochemical analysis of paraffin-embedded mouse pancreas tissue using anti-Phospho-eIF-2a (S51) antibody. Counter stained with hematoxylin.
7. ICC staining Phospho-eIF-2a (S51) in Hela cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.
8. Flow cytometric analysis of Hela cells with Phospho-eIF-2a (S51) antibody at 1/50 dilution (blue) compared with an unlabelled control (cells without incubation with primary antibody;

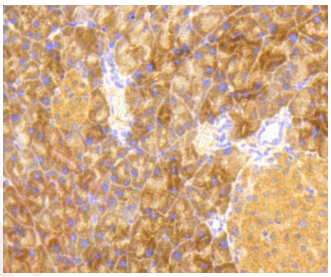


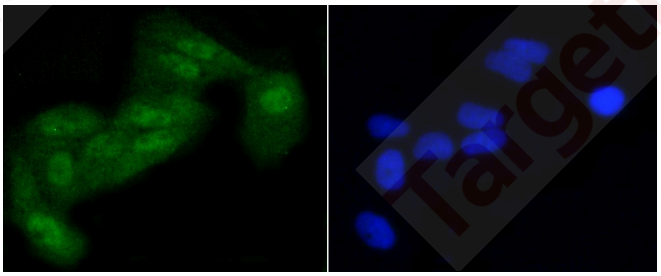


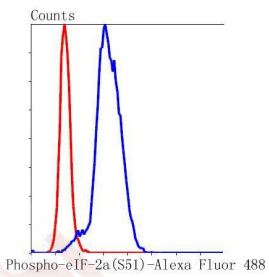












Application: FCM,ICC/IF,IHC,IP,WB

Recommended: WB: 1:1000; IHC: 1:50-200; ICC/IF: 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: A synthesized phosphopeptide: human eIF-2a around the phosphorylation site of Ser51

Antigen Species: Human

Uniprot ID: Q9BY44

Synonyms: eIF2α (p-Ser51);Phospho-eIF2α (S51);EIF-2;EIF-2α;EIF-2alpha;p-eIF2α (Ser51);eIF2α (p-S51); EIF-2A;EIF2alpha;EIF2;p-eIF2α (S51);EIF2A

Research Background

Phosphorylation of the eukaryotic initiation factor 2 (eIF2) α subunit is a well-documented mechanism to downregulate protein synthesis under a variety of stress conditions. Eukaryotic initiation factor 2 binds GTP and Met-tRNAi and transfers Met-tRNA to the 40S subunit to form the 43S preinitiation complex. eIF2 promotes a new round of translation initiation by exchanging GDP for GTP, a reaction catalyzed by eIF2B. Kinases that are activated by viral infection (PKR), endoplasmic reticulum stress (PERK/PEK), amino acid deprivation (GCN2), or heme deficiency (HRI) can phosphorylate the α subunit of eIF2. This phosphorylation stabilizes the eIF2-GDP-eIF2B complex and inhibits the turnover of eIF2B. Induction of PKR by IFN-γ and TNF-α induces potent phosphorylation of eIF2α at Ser51.

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