Anti-Phospho-eIF4G (S1108) Antibody [PS01-08] HA721276

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 175 kDa
Clone number:	PS01-08

Description: Eukaryotic translation initiation factor 4 G (eIF4G) is a protein involved in eukaryotic translation initiation and is a component of the eIF4F cap-binding complex. Orthologs of eIF4G have been studied in multiple species, including humans, yeast, and wheat. However, eIF4G is exclusively found in domain Eukarya, and not in domains Bacteria or Archaea, which do not have capped mRNA. As such, eIF4G structure and function may vary between species, although the human eIF4G 1 has been the focus of extensive studies. Across species, eIF4G strongly associates with eIF4E, the protein that directly binds the mRNA cap. Together with the RNA helicase protein eIF4A, these form the eIF4F complex. Within the cell eIF4G is found primarily in the cytoplasm, usually bound to eIF4E; however, it is also found in the nucleus, where its function is unknown. It may have a role in nonsense-mediated decay. eIF4G has been implicated in breast cancer. It appears in increased levels in certain types of breast cancer and increases production of mRNAs that contain IRESs; these mRNAs produce hypoxia- and stress-related proteins that encourage blood vessel invasion (which is important for tumorigenesis).

Immunogen: Synthetic peptide corresponding to Human eIF4G1 (phospho S1108).

Positive control: A431 cell lysate, SK-Br-3 cell lysate, MCF-7 cell lysate, human ovary cancer tissue.

Subcellular location: Cytosol. Nucleus.

Database links: SwissProt: Q04637 Human

Recommended Dilutions:

WB	1:1,000
IHC-P	1:1,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

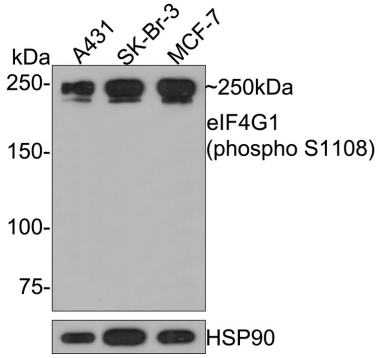

Fig1: Western blot analysis of Phospho-eIF4G (S1108) on different lysates with Rabbit anti-Phospho-eIF4G (S1108) antibody (HA721276) at 1/1,000 dilution.

Lane 1: A431 cell lysate
Lane 2: SK-Br-3 cell lysate
Lane 3: MCF-7 cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 175 kDa
Observed band size: 250 kDa

Exposure time: 2 minutes;

6% 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 (HA721276) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:300,000 dilution was used for 1 hour at room temperature.

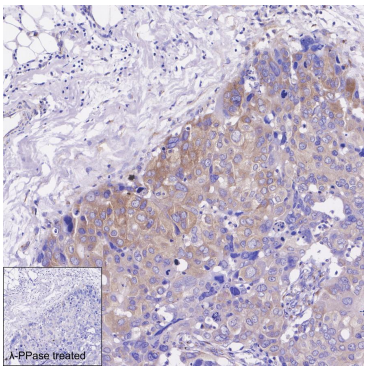

Fig2: Immunohistochemical analysis of paraffin-embedded human ovary cancer tissue untreated / treated with λpp with Rabbit anti-Phospho-eIF4G (S1108) antibody (HA721276) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721276) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Weiniu Gan; Michael La Celle & Robert E. Rhoads (1998). "Functional Characterization of the Internal Ribosome Entry Site of eIF4G mRNA*". The Journal of Biological Chemistry. 273 (9): 5006–5012.
2. Ivan B. Lomakin; Christopher U. T. Hellen & Tatyana V. Pestova (2000). "Physical Association of Eukaryotic Initiation Factor 4G (eIF4G) with eIF4A Strongly Enhances Binding of eIF4G to the Internal Ribosomal Entry Site of Encephalomyocarditis Virus and Is Required for Internal Initiation of Translation". Mol Cell Biol. 20 (16): 6019–6029.