

# Human elF2α Antibody

Antigen Affinity-purified Polyclonal Goat IgG Catalog Number: AF3997

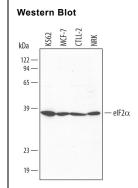
DESCRIPTION		
Species Reactivity	Human	
Specificity	Detects human, mouse, and rat $elF2\alpha$ in Western blots.	
Source	Polyclonal Goat IgG	
Purification	Antigen Affinity-purified	
Immunogen	E. coli-derived recombinant human eIF2α Met1-Asp315 Accession # Q53XC0	
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.	

## APPLICATIONS

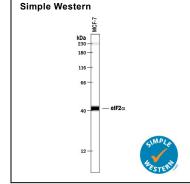
Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	1 μg/mL	See Below
Simple Western	10 μg/mL	See Below

### DATA



Detection of Human elF2 $\alpha$  by Western Blot. Western blot shows lysates of K562 human chronic myelogenous leukemia cell line, MCF-7 human breast cancer cell line, CTLL-2 mouse cytotoxic T cell line, and NRK rat normal kidney cell line. PVDF membrane was probed with 1  $\mu$ g/mL of Goat Anti-Human elF2 $\alpha$  Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3997) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for elF2 $\alpha$  at approximately 38 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.



Detection of Human eIF2 $\alpha$  by Simple Western<sup>TM</sup>. Simple Western lane view shows lysates of MCF-7 human breast cancer cell line, loaded at 0.2 mg/mL. A specific band was detected for eIF2 $\alpha$  at approximately 42 kDa (as indicated) using 10  $\mu$ g/mL of Goat Anti-Human eIF2 $\alpha$  Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3997) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system. Non-specific interaction with the 230 kDa Simple Westem standard may be seen with this antibody.

# PREPARATION AND STORAGE

Reconstitution Reconstitute at 0.2 mg/mL in sterile PBS

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

\*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

## BACKGROUND

elF2α (eukaryotic translation initiation factor 2 alpha subunit) is a subunit of the elF2 protein, an important regulator of translation initiation. Phosphorylation of elF2α on Ser 52 increases the affinity of elF2α for elF2B, a guanine nucleotide exchange factor needed for the recycling of elF2-GDP to elF2-GTP. Reduction of elF2-GTP levels leads to the suppression of the overall rate of protein synthesis. Heme-regulated inhibitor (HRI), ER-resident protein kinase PERK, dsRNA activated protein kinase PKR, and the homologue of the *S. cerevisiae* protein kinase GCN2 are all elF2α kinases.

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