

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human, mouse, and rat eIF2 α in Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human eIF2 α Met1-Asp315 Accession # Q53XC0
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m 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 μ g/mL	See Below
Simple Western	10 μ g/mL	See Below

DATA

Western Blot

Detection of Human eIF2 α 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 μ g/mL of Goat Anti-Human eIF2 α Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3997) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for eIF2 α at approximately 38 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Simple Western

Detection of Human eIF2 α by Simple Western™. 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 α at approximately 42 kDa (as indicated) using 10 μ g/mL of Goat Anti-Human eIF2 α 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 Western 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
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 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

eIF2 α (eukaryotic translation initiation factor 2 alpha subunit) is a subunit of the eIF2 protein, an important regulator of translation initiation. Phosphorylation of eIF2 α on Ser 52 increases the affinity of eIF2 α for eIF2B, a guanine nucleotide exchange factor needed for the recycling of eIF2-GDP to eIF2-GTP. Reduction of eIF2-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 eIF2 α kinases.