Data Sheet (Cat.No.TMAC-01262)

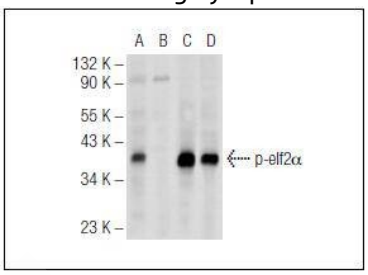
Anti-Phospho-EIF2S1 (Ser 52) Polyclonal Antibody

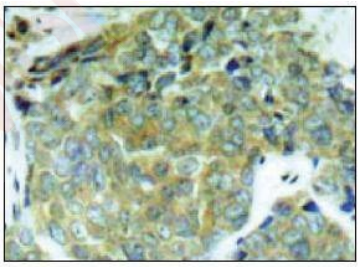
Product Details

Reactivity:	Human,Mouse,Rat
Conjugation:	Unconjugated
Molecular Weight:	Theoretical: 36 kDa.
Purification:	Immunogen affinity purified

Applications

Verified Activity:	1. Western blot analysis of eIF2α phosphorylation in untreated (A, C) and lambda protein phosphatase treated (B, D) HEK293 whole cell lysates. Antibodies tested include p-eIF2α (Ser 52)(A, B) and eIF2α(C, D). 2. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing cytoplasmic staining.





Application:	IF,IHC-P,IP,WB
Recommended	WB: 1:100-1000; IHC-P: 1:50-500; IP: 1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)

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 short amino acid sequence containing phosphorylated Ser 52 of eIF2α of human origin
Antigen Species:	human
Uniprot ID:	P05198
Synonyms:	p-EIF2S1 (S52);Eukaryotic translation initiation factor 2 subunit 1 alpha 35kDa;EIF2S1 (p-Ser52); Phospho-EIF2S1 (S52);EIF2 alpha;IF2A_HUMAN;p-EIF2S1 (Ser52);EIF 2;EIF2;EIF 2A;EIF2S1 (p-S52);EIF2A;EIF 2alpha;EIF 2 alpha

Research Background

The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. The eukaryotic initiation complex is composed of three subunits, designated eIF2, eIF2 and eIF2 (eukaryotic translation initiation factor 2 , and , respectively), all of which work in concert to form a ternary complex with GTP and tRNA in the early stages of protein synthesis. eIF2, also known as EIF2S1 or EIF2, is a 315 amino acid subunit of the eukaryotic initiation complex that functions to bind tRNA to the 40S ribosomal subunit (in a GTP-dependent manner), thereby initiating translation. In addition, the phosphorylation state of eIF2 controls the rate of tRNA translation. When eIF2 is not phosphorylated, translation occurs at a normal rate. However, upon phosphorylation by one of several kinases, eIF2 is stabilized, thus preventing the GDP/GTP exchange reaction and slowing translation.