

eIF2 α (Phospho Ser51) (PTR1316) Mouse mAb

CatalogNo: YP1877

Key Features

Host Species

- Mouse

Reactivity

- Human, Mouse, Rat

Applications

- WB, IF, ELISA

MW

- 36kD (Calculated)
40kD, 90kD (Observed)

Isotype

- IgG2b, Kappa

Storage

Storage* -15°C to -25°C/1 year (Do not lower than -25°C)

Formulation PBS, 50% glycerol, 0.05% Proclin 300, 0.05% BSA

Recommended Dilution Ratios

WB 1:500-2000

IF 1:100-500

ELISA 1:1000-5000

Basic Information

Clonality Monoclonal

Clone Number PTR1316

Immunogen Information

Immunogen Synthesized peptide derived from human eIF2 α AA range: 1-100

Specificity This antibody detects endogenous levels of eIF2 α (Phospho Ser51) protein.

Target Information

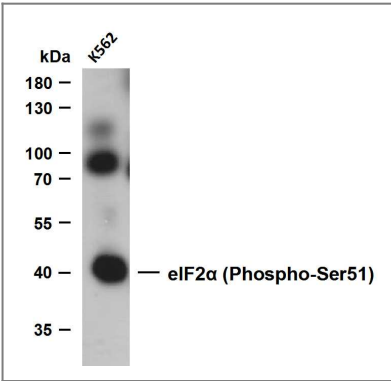
Gene name	EIF2S1 EIF2A
Protein Name	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (eIF-2A) (eIF-2alpha)

Organism	Gene ID	UniProt ID
Human	1965;	P05198;
Mouse	13665;	Q6ZWX6;
Rat	54318;	P68101;

Function

Functions in the early steps of protein synthesis by forming a ternary complex with GTP and initiator tRNA . This complex binds to a 40S ribosomal subunit , followed by mRNA binding to form a 43S pre-initiation complex . Junction of the 60S ribosomal subunit to form the 80S initiation complex is preceded by hydrolysis of the GTP bound to eIF-2 and release of an eIF-2-GDP binary complex . In order for eIF-2 to recycle and catalyze another round of initiation , the GDP bound to eIF-2 must exchange with GTP by way of a reaction catalyzed by eIF-2B . EIF2S1/eIF-2-alpha is a key component of the integrated stress response (ISR) , required for adaptation to various stress: phosphorylation by metabolic-stress sensing protein kinases (EIF2AK1/HRI , EIF2AK2/PKR , EIF2AK3/PERK and EIF2AK4/GCN2) in response to stress converts EIF2S1/eIF-2-alpha in a global protein synthesis inhibitor , leading to an attenuation of cap-dependent translation , while concomitantly initiating the preferential translation of ISR-specific mRNAs , such as the transcriptional activators ATF4 and QRI1 , and hence allowing ATF4- and QRI1-mediated reprogramming .

Validation Data



Whole cell lysates were separated by 10% SDS-PAGE, and the membrane was blotted with anti-eIF2α (Phospho-Ser51) (PTR1316) antibody. The HRP-conjugated Goat anti-Mouse IgG (H + L) antibody was used to detect the antibody. Lane 1: K562

Contact information

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Ser51) (PTR1316)
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