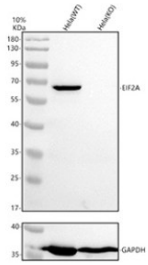
EIF2A Antibody 18E24 / EIF2A Rabbit Monoclonal Antibody [clone 18E24] (FY13707)

Catalog No.	Formulation	Size
FY13707	Rabbit IgG in stabilizing components, phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol	100 ul

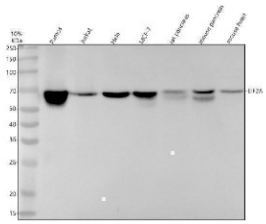
Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human, Mouse, Rat
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	18E24
Purity	Affinity purified
UniProt	Q9BY44
Applications	Western blot: 1:500
Limitations	This EIF2A Antibody 18E24 / EIF2A Rabbit Monoclonal Antibody is available for research use only.



EIF2A Antibody 18E24 WB Analysis of HeLa WT and EIF2A KO Cells. Western blot analysis of wild-type (WT) and EIF2A-knockout (KO) human HeLa whole-cell lysates using EIF2A Rabbit Monoclonal Antibody clone 18E24 at a 1:500 dilution. A prominent immunoreactive band at approximately 65 kDa is detected in WT lysate but is absent in the KO sample, supporting EIF2A-specific detection under the tested conditions. No appreciable additional bands are observed. GAPDH serves as a loading control, with comparable signals in both lanes.



EIF2A Antibody 18E24 WB Analysis of Human, Mouse and Rat Samples. Western blot analysis of human Ramos (lane 1), Jurkat (lane 2), HeLa (lane 3), and MCF-7 (lane 4) whole-cell lysates, rat pancreas tissue (lane 5), mouse pancreas tissue (lane 6), and mouse heart tissue (lane 7) using EIF2A Rabbit Monoclonal Antibody clone 18E24 at a 1:500 dilution. Immunoreactive bands are detected at approximately 65 kDa across all seven samples, consistent with the predicted molecular weight of EIF2A. Signal intensity varies among the samples, with prominent bands in several human cell lines and weaker detection in the rat and mouse tissues.

Description

EIF2A Antibody 18E24 / EIF2A Rabbit Monoclonal Antibody recognizes eukaryotic translation initiation factor 2A (EIF2A), a protein involved in alternative mechanisms of translation initiation and the regulation of protein synthesis. EIF2A is distinct from the alpha subunit of the canonical eukaryotic initiation factor 2 complex, encoded by EIF2S1. Whereas the conventional eIF2 complex delivers initiator methionyl-tRNA to the ribosome through a GTP-dependent mechanism, EIF2A participates in specialized initiation pathways that can operate independently of this canonical machinery. These alternative mechanisms contribute to the flexibility of protein synthesis under changing cellular conditions.

Translation initiation is a highly regulated process that determines which messenger RNAs are translated into proteins. Under normal growth conditions, the canonical eIF2 complex supports initiation at AUG start codons. Cellular stress can activate signaling pathways that phosphorylate EIF2S1, reducing the availability of active eIF2 and suppressing general protein synthesis. Despite this inhibition, selected transcripts may continue to undergo translation through alternative initiation mechanisms. EIF2A has been implicated in certain forms of non-canonical initiation, including the recruitment of initiator tRNA and translation from selected non-AUG start codons.

The contribution of EIF2A to protein synthesis depends on the transcript and cellular context. Experimental studies have associated EIF2A with specialized translation events during stress, including conditions involving endoplasmic reticulum dysfunction and altered nutrient availability. By participating in alternative initiation pathways, EIF2A may help maintain production of selected proteins when conventional translation initiation is restricted. However, EIF2A is not a universal substitute for the canonical eIF2 complex, and its precise contribution varies among different experimental systems and messenger RNA substrates.

Alternative translation initiation has attracted interest in cancer biology, cellular adaptation, and the regulation of gene expression during environmental stress. Changes in initiation mechanisms can influence the production of regulatory proteins and alter cellular responses to unfavorable conditions. EIF2A is therefore relevant to investigations of translational control and the mechanisms that permit selective protein synthesis during periods of reduced global translation. EIF2A Antibody 18E24 provides a reagent for studying EIF2A protein expression and its relationship to non-canonical translation initiation, ribosome function, and cellular stress adaptation.

Additional EIF2A antibody formats and validation data are available on our main EIF2A Antibody page.

Application Notes

Optimal dilution of the EIF2A Antibody 18E24 / EIF2A Rabbit Monoclonal Antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Eukaryotic translation initiation factor 2A protein was used as the immunogen for the EIF2A Antibody 18E24.

Storage

The EIF2A Antibody 18E24 can be stored at -20oC.

Alternate Names

Eukaryotic translation initiation factor 2A antibody, Eukaryotic initiation factor 2A antibody, eIF2A protein antibody, Translation initiation factor EIF2A antibody, Alternative translation initiation factor antibody, EIF2A translation factor antibody

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