

ABfinity™ EIF2a [pS51] Recombinant Rabbit Monoclonal Antibody

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Catalog Number: 701268

Store at 2°C to 8°C (short-term), or -20°C (long-term)

Clonality: Monoclonal
Concentration: 0.5 mg/mL
Quantity: 100 µg
Volume: 200 µL

Host/Class: Rabbit IgG
Reactivity: Human EIF2a [pS51]
Predicted Reactivity: Human

Product Description

EIF2a (eukaryotic initiation factor 2A) is a heterotrimer composed of three subunits (alpha, beta, and gamma). This translation initiation factor drives binding of initiator methionyl-tRNA (met-tRNAi) to the 40S ribosome in an AUG-dependent manner to form the 43S pre-initiation complex. The polypeptide can be phosphorylated by related protein kinases activated in response to stress. Phosphorylated EIF2A inhibits EIF2B activity and prevents guanine nucleotide exchange.

Product Specifications

Immunogen: Phosphopeptide corresponding to amino acids 48–57 of human Eukaryotic translation initiation factor 2A [pS51]
Alternate Names: EIF-2, EIF2A
Apparent MW: ~36 kDa
Gene ID: 1965
Protein Accession No.: P05198
Sequence Identity: Human
Sequence Homology: Mouse, Rat, Monkey, Rabbit, Horse
Clone/PAD: 10H21L20
Lot: See product label

Product Applications

Application	Species	Test Material	Concentration
Western blotting	Human	K562 cells	2–3 µg/mL
Immunocytochemistry	Human	HeLa cells	1–2 µg/mL
Indirect ELISA	Human	Phosphopeptide	1.5 × 10 ⁻⁴ to 3 µg/mL

Storage and Handling

Store the antibody at 2°C to 8°C for up to 1 month, -20°C for long-term storage. Avoid repeated freezing and thawing.

Stability

When stored as instructed, expires one year from date of receipt unless otherwise indicated on product label.

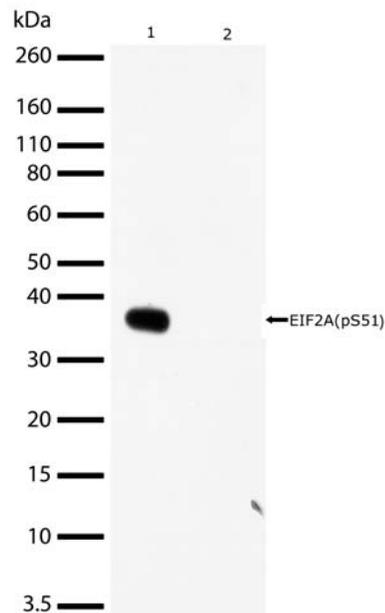


Figure 1 Western blot analysis of ABfinity™ EIF2a [pS51] Recombinant Rabbit Monoclonal Antibody (Cat. no. 701268).

Western blot analysis was performed on whole cell extracts from K562 cells treated with IFN alpha (100 ng/mL) for 20 minutes (**lane 1**). Endogenous levels of phosphorylated EIF2a was detected at ~36 kDa using ABfinity™ EIF2a [pS51] Recombinant Rabbit Monoclonal Antibody at a concentration of 2 µg/mL. To confirm specificity, competition was performed with the phosphopeptide to inhibit antibody binding (**lane 2**). The blot was developed using enhanced chemiluminescence (ECL) method.

Storage Buffer

Phosphate buffered saline (PBS) with 0.09% sodium azide.

Caution: Sodium azide is extremely toxic and may react with lead and copper plumbing to form highly explosive metal azides. Properly dispose of solutions containing sodium azide. Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing and gloves. SDSs are available at www.lifetechnologies.com/support.

For research use only. Not for human or animal therapeutic or diagnostic use.

Manufacturing Site • 7335 Executive Way • Frederick • MD 21704 • E-mail: techsupport@lifetech.com

Product Documentation

To obtain a Certificate of Analysis or SDS, visit www.lifetechnologies.com/support.

Related Products

Product Name	Quantity	Catalog No.
iBlot® Dry Blotting System	1 unit	IB1001
WesternBreeze® Chromogenic Kit Anti-Rabbit	1 kit	WB7105
WesternBreeze® Chemiluminescent Kit, Anti-Rabbit	1 kit	WB7106
Goat anti-mouse (H+L), HRP conj.	1 mg	G21040
Goat anti-rabbit (H+L), HRP conj.	1 mg	G21234
Goat anti-mouse (H+L), AP conj.	1 mg	G21060
Goat anti-rabbit (H+L), AP conj.	1 mg	G21079
Nitrocellulose, 0.2 µm	20/pack	LC2000

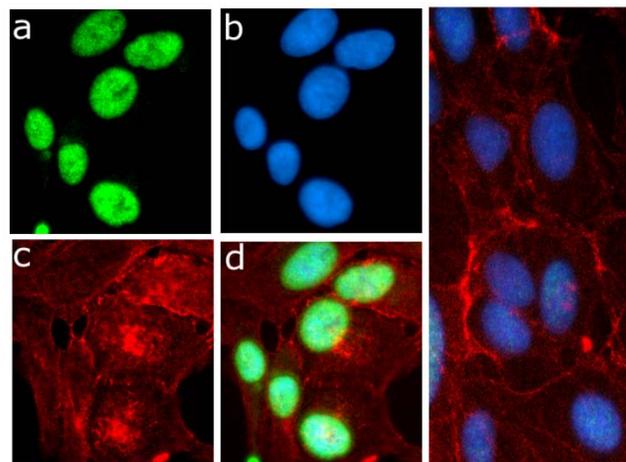


Figure 2 Immunocytochemistry analysis of ABfinity™ EIF2a [pS51] Recombinant Rabbit Monoclonal Antibody (Cat. no. 701268).

Immunocytochemistry of HeLa cells stained with ABfinity™ EIF2a [pS51] Recombinant Rabbit Monoclonal Antibody, using **a:** Alexa Fluor® 488 goat anti-rabbit as a secondary antibody (green). **b:** DAPI stained HeLa nuclei (blue). **c:** Actin stained with Alexa Fluor® 594 phalloidin (red). **d:** Composite image of cells showing nuclear localization of EIF2a. **e:** Composite image of cells showing inhibition of antibody binding after competition with the phosphopeptide.

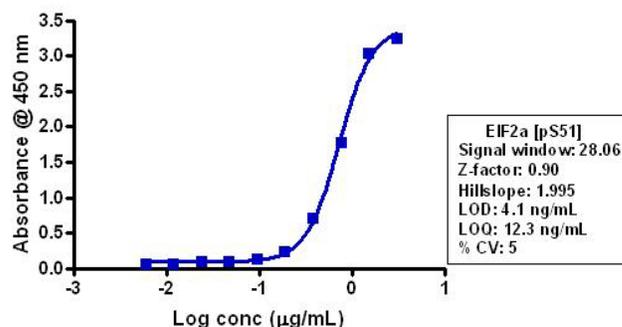


Figure 3 Indirect ELISA of ABfinity™ EIF2a [pS51] Recombinant Rabbit Monoclonal Antibody (Cat. no. 701268).

Indirect ELISA was performed using various dilutions of ABfinity™ EIF2a [pS51] Recombinant Rabbit Monoclonal Antibody to detect EIF2A phosphopeptide coated onto the plate. A non-linear regression analysis was performed (4 PL), and LOD and LOQ for the antibody was determined.

Explanation of symbols

Symbol	Description	Symbol	Description
	Catalogue Number		Batch code
	Research Use Only		In vitro diagnostic medical device
	Use by		Temperature limitation
	Manufacturer		European Community authorised representative
	Without, does not contain		With, contains
	Protect from light		Consult accompanying documents
	Directs the user to consult instructions for use (IFU), accompanying the product.		

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