

## ABfinity™ EIF2a [pS51] Recombinant Rabbit Monoclonal Antibody

Publication Number: MAN0007000

Rev. 1.00

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

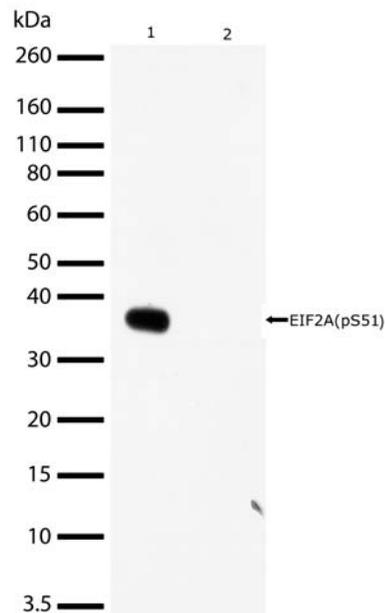
Application	Species	Test Material	Concentration
Western blotting	Human	K562 cells	2–3 µg/mL
Immunocytochemistry	Human	HeLa cells	1–2 µg/mL
Indirect ELISA	Human	Phosphopeptide	1.5 × 10 <sup>-4</sup> to 3 µg/mL

### 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](http://www.lifetechnologies.com/support).

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

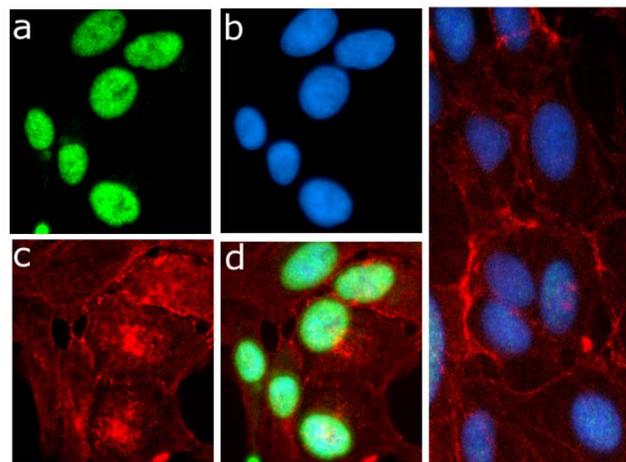
Manufacturing Site • 7335 Executive Way • Frederick • MD 21704 • E-mail: [techsupport@lifetech.com](mailto:techsupport@lifetech.com)

## Product Documentation

To obtain a Certificate of Analysis or SDS, visit [www.lifetechnologies.com/support](http://www.lifetechnologies.com/support).

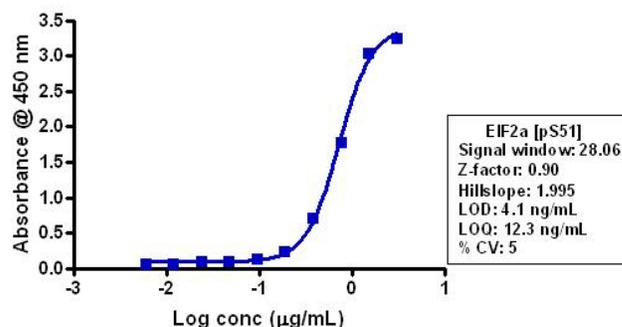
## Related Products

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.		

## Limited Product Warranty

Life Technologies Corporation and/or its affiliate(s) warrant their products as set forth in the Life Technologies' General Terms and Conditions of Sale found on Life Technologies' website at [www.lifetechnologies.com/termsandconditions](http://www.lifetechnologies.com/termsandconditions). If you have any questions, please contact Life Technologies at [www.lifetechnologies.com/support](http://www.lifetechnologies.com/support).

## Limited Use Label License No. 327: Recombinant Antibody Technology

Notice to Purchaser: The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product in research and manufacturing conducted by the buyer (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product, (b) its components or (c) materials made using this product or its components to a third party or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes. The buyer may transfer information or materials made through the use of this product to a scientific collaborator, provided that such transfer is not for any Commercial Purpose, and that such collaborator agrees in writing (a) not to transfer such materials to any third party, and (b) to use such transferred materials and/or information solely for research and not for Commercial Purposes. Commercial Purposes means any activity by a party for consideration and may include, but is not limited to: (1) use of the product or its components for contract manufacturing services; (2) use of the product or its components to provide a service, information, or data; (3) use of the product itself or its components as a therapeutic, diagnostic or prophylactic; or (4) resale of the product or its components, whether or not such product or its components are resold for use in research or manufacturing. If the purchaser is not willing to accept the limitations of this limited use statement, Life Technologies is willing to accept return of the product for a full refund. For information on obtaining additional rights, please contact [outlicensing@lifetech.com](mailto:outlicensing@lifetech.com).

LIFE TECHNOLOGIES AND/OR ITS AFFILIATE(S) DISCLAIM ALL WARRANTIES WITH RESPECT TO THIS DOCUMENT, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. TO THE EXTENT ALLOWED BY LAW, IN NO EVENT SHALL LIFE TECHNOLOGIES AND/OR ITS AFFILIATE(S) BE LIABLE, WHETHER IN CONTRACT, TORT, WARRANTY, OR UNDER ANY STATUTE OR ON ANY OTHER BASIS FOR SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE, MULTIPLE OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING FROM THIS DOCUMENT, INCLUDING BUT NOT LIMITED TO THE USE THEREOF.

©2012 Life Technologies Corporation. All rights reserved. The trademarks mentioned herein are the property of Life Technologies Corporation or their respective owners.

For support visit [www.lifetechnologies.com/support](http://www.lifetechnologies.com/support) or email [techsupport@lifetech.com](mailto:techsupport@lifetech.com)

[www.lifetechnologies.com](http://www.lifetechnologies.com)

15 July 2012

**life**  
technologies™