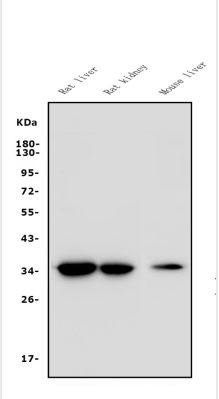
EIF2B1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	EIF2B1, Polyclonal Antibody
Full Product Name	Anti-EIF2B1 Antibody
Product Gene Name	anti-EIF2B1 antibody
Product Synonym Names	EIF2B1; EIF2BA; Translation initiation factor eIF-2B subunit alpha; eIF-2B GDP-GTP exchange factor subunit alpha; eukaryotic translation initiation factor 2B subunit alpha
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
Purity/Purification	Immunogen affinity purified.
Specificity	Rabbit IgG polyclonal antibody for EIF2B1EIF2AK4 detection.
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.
Molecular Weight	24,618 Da
OMIM	603896
3D Structure	ModBase 3D Structure for Q14232
Immunogen	A synthetic peptide corresponding to a sequence of human CEIF2B1 (AESFKFVRLFPLNQQD).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems||Lab recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (MBS176460) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (MBS176453) for IHC(P) and ICC.
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-EIF2B1 antibody	Western Blot (WB), Immunohistochemistry-Paraffin (IHC-P), Immunocytochemistry (ICC), Immunofluorescence (IF), Flow Cytometry (FC/FACS/FCM)
Application Notes for anti-EIF2B1 antibody	WB: 0.25-0.5ug/ml|Mouse, Rat| IHC-P: 2-5ug/ml|Human, Rat| ICC/IF: 5ug/ml|Human| FC/FACS/FCM: 1-3ug/1x106 cells|Human|
Related Product Information for anti-EIF2B1 antibody	Translation initiation factor eIF-2B subunit alpha is a protein that in humans is encoded by the EIF2B1 gene. This gene encodes one of five subunits of eukaryotic translation initiation factor 2B (EIF2B), a GTP exchange factor for eukaryotic initiation factor 2 and an essential regulator for protein synthesis. Mutations in this gene and the genes encoding other EIF2B subunits have been associated with leukoencephalopathy with vanishing white matter.
Product References and Citations for anti-EIF2B1 antibody	1. Converse, P. J. Personal Communication. Baltimore, Md. 2/12/2002. 2. Flowers, K. M., Mellor, H., Kimball, S. R., Jefferson, L. S. Structure and sequence of the gene encoding the alpha-subunit of rat translation initiation factor-2B. Biochim. Biophys. Acta 1264: 163-167, 1995. 3. Gross, M. B. Personal Communication. Baltimore, Md. 5/28/2015.

Other Notes	Small volumes of anti-EIF2B1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for EIF2B1 purchase	MBS1753650 is an antibody targeting EIF2B1. Reactive in Human, Mouse, Rat. Host: Rabbit.



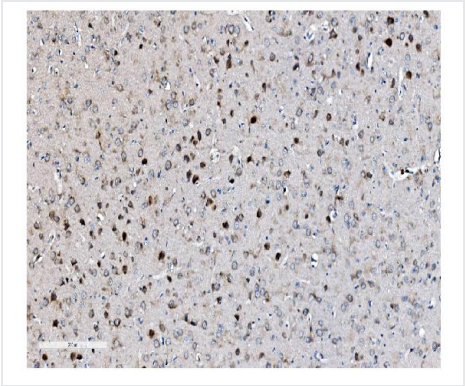
Western Blot (WB) of anti-EIF2B1 antibody

Figure 1. Western blot analysis of EIF2B1 using anti-EIF2B1 antibody (MBS1753650).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.Lane 1: rat liver tissue lysatesLane 2: rat kidney tissue lysatesLane 3: mouse liver tissue lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1. 5 hour at RT. The membrane was incubated with rabbit anti-EIF2B1 antigen affinity purified polyclonal antibody (Catalog # MBS1753650) at 0. 5 ?g/mL overnight at 4 degree C, then washed with TBS-0. 1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1. 5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # MBS176460) with Tanon 5200 system. A specific band was detected for EIF2B1 at approximately 34KD. The expected band size for EIF2B1 is at 34KD.



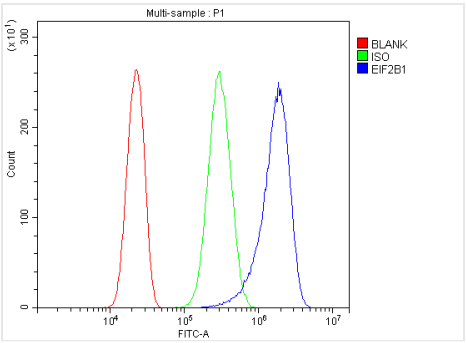
Immunohistochemistry (IHC) of anti-EIF2B1 antibody

Figure 2. IHC analysis of EIF2B1 using anti-EIF2B1 antibody (MBS1753650).EIF2B1 was detected in paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2?g/ml rabbit anti-EIF2B1 Antibody (MBS1753650) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # MBS176451) with DAB as the chromogen.



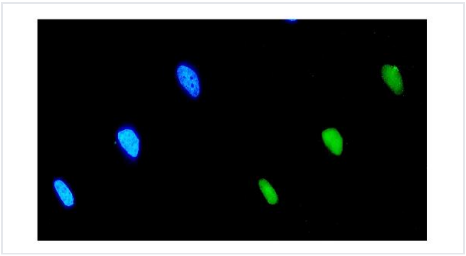
Immunohistochemistry (IHC) of anti-EIF2B1 antibody

Figure 3. IHC analysis of EIF2B1 using anti-EIF2B1 antibody (MBS1753650).EIF2B1 was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2?g/ml rabbit anti-EIF2B1 Antibody (MBS1753650) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # MBS176451) with DAB as the chromogen.



Flow Cytometry (FC/FACS) of anti-EIF2B1 antibody

Figure 4. Flow Cytometry analysis of PC-3 cells using anti-EIF2B1 antibody (MBS1753650).Overlay histogram showing PC-3 cells stained with MBS1753650 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-EIF2B1 Antibody (MBS1753650,1?g/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10?g/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1?g/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



Immunofluorescence (IF) of anti-EIF2B1 antibody
Figure 5. IF analysis of EIF2B1 using anti- EIF2B1 antibody (MBS1753650).EIF2B1 was detected in immunocytochemical section of Hela cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (MBS176582) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5?g/mL rabbit anti- EIF2B1 Antibody (MBS1753650) overnight at 4 degree C. DyLight®488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for EIF2B1. It may not necessarily be applicable to this product.

NCBI GI #	4503503
NCBI GeneID	1967
NCBI Accession #	NP_001405.1
UniProt Primary Accession #	Q14232
UniProt Secondary Accession #	Q3SXP4; A6NLY9; B4DGX0
UniProt Related Accession #	Q14232
GenBank Nucleotide #	NM_001414.3
NCBI Official Full Name	translation initiation factor eIF-2B subunit alpha
NCBI Official Synonym Full Names	eukaryotic translation initiation factor 2B, subunit 1 alpha, 26kDa
NCBI Official Symbol	EIF2B1
NCBI Official Synonym Symbols	EIF2B; EIF2BA
UniProt Protein Name	Translation initiation factor eIF-2B subunit alpha
UniProt Synonym Protein Names	eIF-2B GDP-GTP exchange factor subunit alpha
Protein Family	Translation initiation factor
UniProt Gene Name	EIF2B1
UniProt Synonym Gene Names	EIF2BA
UniProt Entry Name	EI2BA_HUMAN
NCBI Protein Information	translation initiation factor eIF-2B subunit alpha; eIF-2B GDP-GTP exchange factor subunit alpha
NCBI Summary for EIF2B1	This gene encodes one of five subunits of eukaryotic translation initiation factor 2B (EIF2B), a GTP exchange factor for eukaryotic initiation factor 2 and an essential regulator for protein synthesis. Mutations in this gene and the genes encoding other EIF2B subunits have been associated with leukoencephalopathy with vanishing white matter. [provided by RefSeq, Oct 2009]

UniProt Comments for EIF2B1	eIF2B-alpha: Catalyzes the exchange of eukaryotic initiation factor 2-bound GDP for GTP. Defects in EIF2B1 are a cause of leukodystrophy with vanishing white matter (VWM). VWM is a leukodystrophy that occurs mainly in children. Neurological signs include progressive cerebellar ataxia, spasticity, inconstant optic atrophy and relatively preserved mental abilities. The disease is chronic-progressive with, in most individuals, additional episodes of rapid deterioration following febrile infections or minor head trauma. While childhood onset is the most common form of the disorder, some severe forms are apparent at birth. A severe, early-onset form seen among the Cree and Chippewayan populations of Quebec and Manitoba is called Cree leukoencephalopathy. Milder forms may not become evident until adolescence or adulthood. Some females with milder forms of the disease who survive to adolescence exhibit ovarian dysfunction. This variant of the disorder is called ovarioleukodystrophy. Belongs to the eIF-2B alpha/beta/delta subunits family. Protein type: Translation initiation; Translation Chromosomal Location of Human Ortholog: 12q24.31 Cellular Component: eukaryotic translation initiation factor 2B complex; membrane; cytoplasm; plasma membrane; cytosol Molecular Function: protein binding; GDP binding; GTP binding; translation initiation factor activity; guanyl-nucleotide exchange factor activity; S-methyl-5-thioribose-1-phosphate isomerase activity; enzyme regulator activity Biological Process: response to peptide hormone stimulus; translation; cellular response to stimulus; cellular protein metabolic process; methionine salvage; response to heat; translational initiation; response to glucose stimulus; negative regulation of translation initiation in response to stress; gene expression; oligodendrocyte development; regulation of translational initiation; positive regulation of GTPase activity Disease: Leukoencephalopathy With Vanishing White Matter
Research Articles on EIF2B1	**1.** These data emphasize the importance of eIF2Balpha in mediating the eIF2 kinase translation-inhibitory activity and may provide insight into the complex nature of vesiculovirus oncolysis.
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