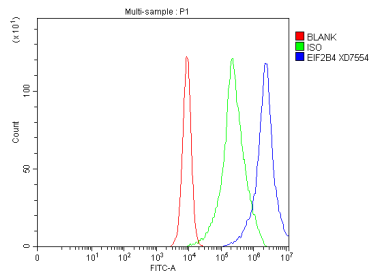
EIF2B4 Antibody / Translation initiation factor eIF2B subunit delta Antibody (FY13583)

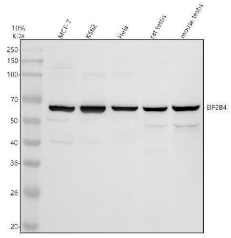
Catalog No.	Formulation	Size
FY13583	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

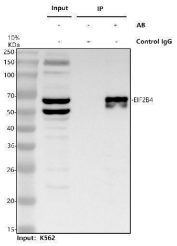
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9UI10
Applications	Western blot: 0.5-1ug/ml Immunoprecipitation: 2ug per 500ug of lysate Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5 ug/ml
Limitations	For research use only, this EIF2B4 Antibody / Translation initiation factor eIF2B subunit delta Antibody is not intended for diagnostic or therapeutic use.



EIF2B4 Antibody by FACS in K562 cells. Flow cytometric analysis using Translation initiation factor eIF2B subunit delta Antibody shows a rightward shift in the blue antibody-stained population compared with the green rabbit IgG isotype control and red unstained control. K562 cells were fixed with 4% paraformaldehyde and permeabilized for intracellular staining, then blocked with 10% normal goat serum. Cells were incubated with 1 ug antibody per 1 x 10^6 cells for 30 minutes at 20oC, followed by Fluoro488-conjugated secondary antibody. This assay measures intracellular staining in fixed, permeabilized cells rather than live-cell surface expression.



EIF2B4 Antibody by WB in human cell lines and rodent testis. Western blot analysis using Translation initiation factor eIF2B subunit delta Antibody detects a band near 58 kDa in human MCF-7 (lane 1), K562 (lane 2), HeLa (lane 3), rat testis (lane 4), and mouse testis (lane 5). The calculated molecular weight is approximately 58 kDa. Reduced samples containing 30 ug protein per lane were separated by 10% SDS-PAGE and transferred to nitrocellulose. Membranes were blocked with 5% nonfat milk and incubated with primary antibody at 0.5 ug/mL overnight at 4oC. An HRP-conjugated secondary antibody and chemiluminescent substrate were used for detection.



EIF2B4 Antibody by IP in K562 cells. Immunoprecipitation using Translation initiation factor eIF2B subunit delta Antibody was evaluated by Western blot. Lane 1 contains K562 input lysate (30 ug), lane 2 is the rabbit IgG immunoprecipitation control, and lane 3 contains protein precipitated from 500 ug K562 lysate with 2 ug antibody. A band near the expected 58 kDa position is present in the antibody immunoprecipitate. The immunoprecipitated material was analyzed with the same primary antibody at 0.5 ug/mL, followed by an HRP-conjugated secondary antibody and chemiluminescent detection.

Description

EIF2B4 Antibody / Translation initiation factor eIF2B subunit delta Antibody detects EIF2B4, the delta subunit of eukaryotic translation initiation factor 2B, a five-subunit guanine nucleotide exchange factor required for efficient protein synthesis. During translation initiation, EIF2 delivers initiator methionyl-tRNA to the small ribosomal subunit in a GTP-dependent manner. After GTP hydrolysis, EIF2 must exchange GDP for GTP before it can participate in another initiation cycle. The EIF2B complex catalyzes this exchange, and EIF2B4 contributes to the assembly and regulatory properties of the complex.

EIF2B contains alpha, beta, gamma, delta, and epsilon subunits, encoded by distinct genes. The complex integrates signals that adjust protein synthesis during cellular stress. Phosphorylation of EIF2 alpha can inhibit EIF2B activity, reducing general translation initiation while favoring selected stress-responsive transcripts. This mechanism forms a central component of the integrated stress response. EIF2B4 is not the catalytic epsilon subunit, but its contribution to the multisubunit structure is important for normal nucleotide-exchange activity and sensitivity to regulatory signals. The Translation initiation factor eIF2B subunit delta Antibody designation refers to this same protein target.

Pathogenic variants in EIF2B genes cause vanishing white matter disease, a neurological disorder characterized by impaired white matter maintenance and vulnerability to physiological stress. Variants in EIF2B4 represent one genetic cause within this group. The disease illustrates how disturbances in a fundamental translation factor can have pronounced effects in the nervous system. Research on EIF2B4 connects translation initiation, cellular stress signaling, and the maintenance of glial function. NSJ Bioreagents includes EIF2B4 among targets involved in translational regulation. An EIF2B4 Antibody provides a means of examining the molecular functions associated with EIF2B4.

Explore related research targets in our Cell Biology Antibodies collection.

Application Notes

The ideal working dilution for the EIF2B4 Antibody / Translation initiation factor eIF2B subunit delta Antibody should be established by the investigator based on assay conditions.

Immunogen

The EIF2B4 Antibody was generated using e. coli-derived human EIF2B4 recombinant protein (amino acids R29-H470).

Storage

After reconstitution, keep the EIF2B4 Antibody at 4oC for up to one month. Alternatively, store aliquots at -20oC for up to six months. Avoid multiple freezing and thawing cycles.

Alternate Names

EIF2B4 antibody, Translation initiation factor eIF2B subunit delta antibody, eukaryotic translation initiation factor 2B subunit delta antibody, EIF2BD antibody, Translation initiation factor eIF-2B subunit delta antibody, eIF-2B GDP-GTP exchange factor subunit delta antibody

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