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eIF2B epsilon Rabbit pAb

Catalog # AP99284

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	Q13144
Other Accession	Q13144
Predicted	Rat, Pig, Human, Mouse, Rabbit, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	80380
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human eIF2B epsilon
Epitope Specificity	101-200/721
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the eIF-2B gamma/epsilon subunits family. Contains 1 W2 domain.
SUBUNIT	Complex of five different subunits; alpha, beta, gamma, delta and epsilon. Interacts with RGS2.
Post-translational modifications	Phosphorylated at Ser-544 by DYRK2; this is required for subsequent phosphorylation by GSK3B (By similarity). Phosphorylated on serine and threonine residues by GSK3B; phosphorylation inhibits its function.Polyubiquitinated, probably by NEDD4 (By similarity).
DISEASE	Defects in EIF2B5 are a cause of leukodystrophy with vanishing white matter (VWM) [MIM:603896]. 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.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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, Nov 2009]

Additional Information

Gene ID	8893
Other Names	CACH; CLE; EIF-2B; EIF2Bepsilon; LVWM; VWM5; EI2BE_HUMAN; EIF2B5; eIF2B GDP-GTP exchange factor subunit epsilon; EIF2BE; EI2BE_MOUSE; EI2BE_RAT; eukaryotic translation initiation factor 2B subunit epsilon; eukaryotic translation initiation factor 2B, subunit 5 (epsilon, 82kD); eukaryotic translation initiation factor 2B, subunit 5 epsilon, 82kDa
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	EIF2B5
Synonyms	EIF2BE
Function	Acts as a component of the translation initiation factor 2B (eIF2B) complex, which catalyzes the exchange of GDP for GTP on eukaryotic initiation factor 2 (eIF2) gamma subunit (PubMed:25858979, PubMed:27023709, PubMed:31048492). Its guanine nucleotide exchange factor activity is repressed when bound to eIF2 complex phosphorylated on the alpha subunit, thereby limiting the amount of methionyl- initiator methionine tRNA available to the ribosome and consequently global translation is repressed (PubMed:25858979, PubMed:31048492).
Cellular Location	Cytoplasm, cytosol {ECO:0000250|UniProtKB:P56287}

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