10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

EEF1A1/ EEF1A2 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6592a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P68104
Other Accession	P02994, Q92005, Q90835, P53013, P17508, Q5VTE0, P17507, P62632, Q71V39, P62631, Q05639, P05303, Q32PH8, P17506, P62630, P68105, P10126, P08736, P62629, P68103, P13549
Reactivity	Human
Predicted	Mouse, Rat, Rabbit, Zebrafish, Hamster, Chicken, Yeast, Xenopus, Bovine, C.Elegans, Drosophila
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB19607
Calculated MW	50141
Antigen Region	46-72

Additional Information

Gene ID	1915
Other Names	Elongation factor 1-alpha 1, EF-1-alpha-1, Elongation factor Tu, EF-Tu, Eukaryotic elongation factor 1 A-1, eEF1A-1, Leukocyte receptor cluster member 7, EEF1A1, EEF1A, EF1A, LENG7
Target/Specificity	This EEF1A1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 46-72 amino acids of human EEF1A1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	EEF1A1/ EEF1A2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EEF1A1
Synonyms	EEF1A, EF1A, LENG7
Function	Translation elongation factor that catalyzes the GTP- dependent binding of aminoacyl-tRNA (aa-tRNA) to the A-site of ribosomes during the elongation phase of protein synthesis (PubMed:26593721, PubMed:26651998, PubMed:36123449, PubMed:36264623, PubMed:36638793). Base pairing between the mRNA codon and the aa-tRNA anticodon promotes GTP hydrolysis, releasing the aa-tRNA from EEF1A1 and allowing its accommodation into the ribosome (PubMed:26593721, PubMed:26651998, PubMed:36123449, PubMed:36264623, PubMed:36638793). The growing protein chain is subsequently transferred from the P-site peptidyl tRNA to the A-site aa-tRNA, extending it by one amino acid through ribosome-catalyzed peptide bond formation (PubMed:26593721, PubMed:26651998, PubMed:36123449, PubMed:36264623). Also plays a role in the positive regulation of IFNG transcription in T-helper 1 cells as part of an IFNG promoter-binding complex with TXK and PARP1 (PubMed:17177976). Also plays a role in cytoskeleton organization by promoting actin bundling (By similarity).
Cellular Location	Cytoplasm. Nucleus. Nucleus, nucleolus. Cell membrane. Note=Colocalizes with DLC1 at actin-rich regions in the cell periphery (PubMed:19158340). Translocates together with ZPR1 from the cytoplasm to the nucleus and nucleolus after treatment with mitogens (PubMed:8650580). Localization at the cell membrane depends on EEF1A1 phosphorylation status and the presence of PPP1R16B (PubMed:26497934).

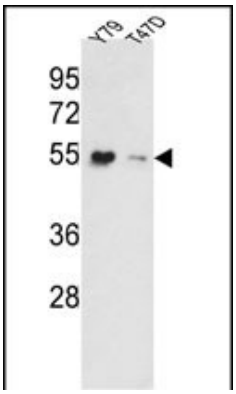
Background

EEF1A1 is an isoform of the alpha subunit of the elongation factor-1 complex, which is responsible for the enzymatic delivery of aminoacyl tRNAs to the ribosome. This isoform (alpha 1) is expressed in brain, placenta, lung, liver, kidney, and pancreas, and the other isoform (alpha 2) is expressed in brain, heart and skeletal muscle. This isoform is identified as an autoantigen in 66% of patients with Felty syndrome.

References

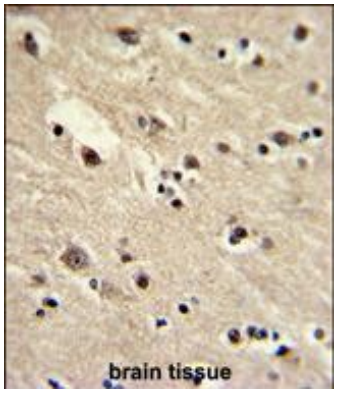
Byun,H.O., Cancer Res. 69 (11), 4638-4647 (2009)

Images

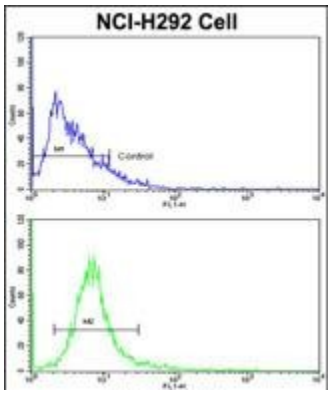


Western blot analysis of EEF1A1/ EEF1A2 Antibody (N-term) (Cat. #AP6592a) in Y79, T47D cell line lysates (35ug/lane). EEF1A1 (arrow) was detected using the purified Pab.

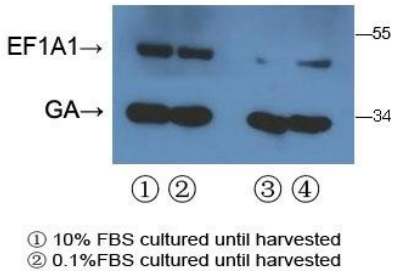
Formalin-fixed and paraffin-embedded human brain with EEF1A1/ EEF1A2 Antibody (N-term), which was



peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow cytometric analysis of NCI-H292 cells using EEF1A1/ EEF1A2 Antibody (N-term) (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



With 293T cell line lysate,resolved proteins were electrophoretically transferred to PVDF membrane and incubated sequentially with primary antibody EEF1A1/ EEF1A2(abgent, Cat. AP6592a, 1:500, 4°C,overnight) and horseradish peroxidase–conjugated second antibo dy(rabbit). After washing, the bound antibody complex was detected using an ECL chemiluminescence reagent and XAR film (Kodak).

Citations

- Proteomic study of HPV-positive head and neck cancers: preliminary results.
- Alcohol Intoxication Following Muscle Contraction in Mice Decreases Muscle Protein Synthesis But Not mTOR Signal Transduction.
- Cytoplasmic protein methylation is essential for neural crest migration.
- Elongation factor-1A1 is a novel substrate of the protein phosphatase 1-TIMAP complex.