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Product datasheet for TP309697

EEF1A1 (NM_001402) Human Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant protein of human eukaryotic translation elongation factor 1 alpha 1 (EEF1A1), 20 µg
Species:	Human
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>RC209697 protein sequence Red=Cloning site Green=Tags(s) MGKEKTHINIVVIGHVDSGKSTTTGHLIYKCGGIDKRTIEKFEKEAAEMGKGSFKYAWVLDKLKAERERG ITIDISLWKFETSKYYVTIIDAPGHRDFIKNMITGTSQADCAVLIVAAGVGEFEAGISKNGQTREHALLA YTLGVKQLIVGVNKMDSTEPPYSQKRYEEIVKEVSTYIKKIGYNPDTVAFVPISGWNGDNMLEPSANMPW FKGWKVTRKDGNASGTTLLEALDCILPPTRPTDKPLRLPLQDVYKIGGIGTVPVGRVETGVLKPGMVVTF APVNVTTEVKSVEMHHEALSEALPGDNVGFNVKNVSVKDVRRGNVAGDSKNDPPMEAAGFTAQVIILNHP GQISAGYAPVLDCHTAHIACKFAELKEKIDRRSGKKLEDGPKFLKSGDAAIVDMVPGKPMCVESFSDYPP LGRFAVRDMRQTVAVGVIKAVDKKAAGAGKVTKSAQKAQKAK TRTRPLEQKLISEEDLAANDILDYKDDDDKV
Tag:	C-Myc/DDK
Predicted MW:	50 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
Bioactivity:	ELISA capture for autoantibodies (PMID:26616590) Biolayer interferometry (BLI) assay (PMID:26624286) Binding assay (PMID:29588400)
Preparation:	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.

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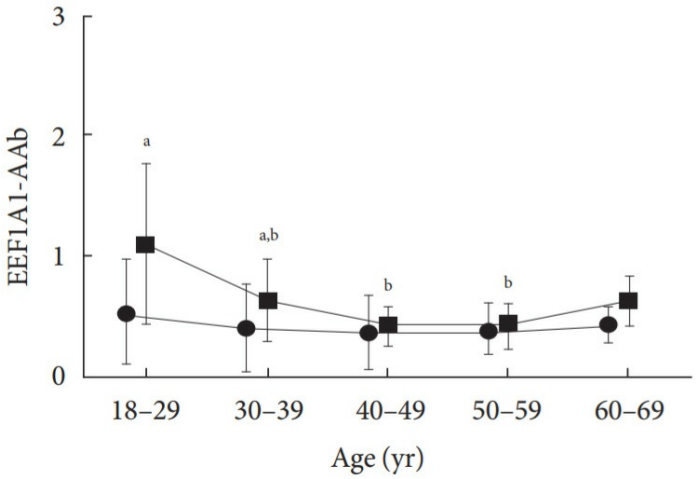
Storage:	Store at -80°C.
Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
RefSeq:	NP_001393
Locus ID:	1915
UniProt ID:	P68104
RefSeq Size:	3528
Cytogenetics:	6q13
RefSeq ORF:	1386
Synonyms:	CCS-3; CCS3; EE1A1; EEF-1; EEF1A; eEF1A-1; EF-Tu; EF1A; GRAF-1EF; LENG7; PTI1
Summary:	This gene encodes 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. This gene has been found to have multiple copies on many chromosomes, some of which, if not all, represent different pseudogenes. [provided by RefSeq, Jul 2008]
Protein Families:	Druggable Genome

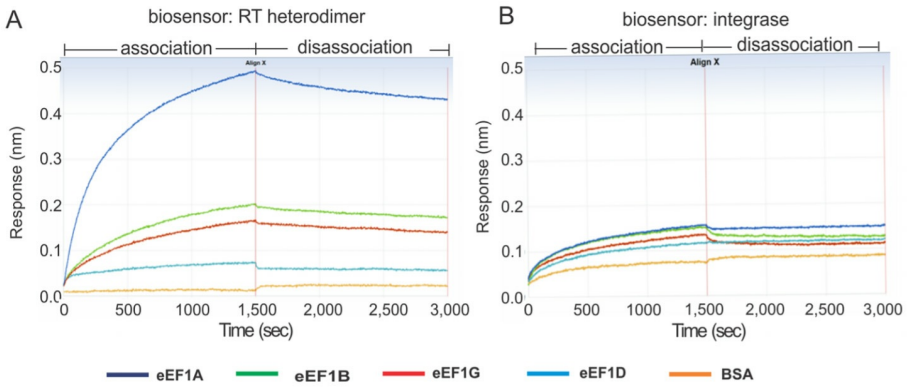
Product images:

	Active RT (ng)	Ka (1/MS)	Kd (1/s)	K_D (nM)
WT RTp51/p66	1.06533 ± 0.67	136350 ± 4150	4.75E-4 ± 2.5E-5	3.4787 ± 0.079
E300R RTp51/p66	1.11267 ± 0.59	135400 ± 7000	1.39E-3 ± 1.9E-4	10.332 ± 1.561

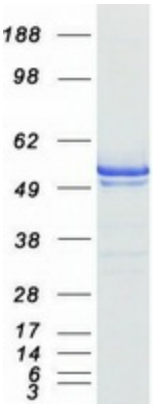
A biolayer interferometry assay on the Octet Red machine determined the association (Ka) and dissociation (Kd) constants of purified wild-type (WT) and E300R mutant HIV-1 reverse transcriptase (RT) heterodimer with biotinylated eEF1A (OriGene TP309697) immobilized on a streptavidin-coated biosensor. The Ka is the rate of RT complex formation with eEF1A per second in a 1 M solution, and the Kd is the fraction of complexes decayed per second. The Ka divided by the Kd is the binding affinity (KD). Figure cited from MBio, PMID: 29588400



The mean levels of serum EEF1A1 autoantibody (EEF1A1-AAb) by age group in type 1 diabetes mellitus patients (squares) vs. non-diabetic control subjects (circles), as measured by ELISA using recombinant EEF1A1 (OriGene TP309697). a: significantly different compared to nondiabetic control subjects in each age group ($P < 0.05$); b: significantly different compared to 18- to 29-year-old in each disease status (non-diabetic control group and type 1 diabetes mellitus patients, respectively; $P < 0.05$). Figure cited from Diabetes Metab J, PMID: 26616590



Biolayer interferometry assays (BLI) of a biotinylated HIV RTp66/p51-loaded or integrase-loaded biosensor with 60 nM of purified eEF1A (OriGene TP309697), eEF1B (OriGene [TP321264]), eEF1D (OriGene [TP303202]), eEF1G (OriGene [TP319578]) or BSA as analytes. Figure cited from PLoS Pathog, PMID: 26624286



Coomassie blue staining of purified EEF1A1 protein (Cat# TP309697). The protein was produced from HEK293T cells transfected with EEF1A1 cDNA clone (Cat# [RC209697]) using MegaTran 2.0 (Cat# [TT210002]).