

Recombinant Human EEF1A1 Protein, Myc/DDK-tagged

Cat. No. EEF1A1-001H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant protein of human eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Human
Source	HEK293
Description	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.
Molecular Mass	50 kDa
Purity	>80% as determined by SDS-PAGE and Coomassie blue staining
Applications	ELISA capture for autoantibodies Biolayer interferometry (BLI) assay Binding assay
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.

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Storage	Store at -80 centigrade.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol
GENE INFORMATION	
Gene Name	EEF1A1 eukaryotic translation elongation factor 1 alpha 1 [Homo sapiens (human)]
Official Symbol	EEF1A1
Synonyms	EEF1A1; eukaryotic translation elongation factor 1 alpha 1; CCS3; EF1A; PTI1; CCS-3; EE1A1; EEF-1; EEF1A; EF-Tu; LENG7; eEF1A-1; GRAF-1EF; elongation factor 1-alpha 1; CTCL tumor antigen; EF-1-alpha-1; EF1a-like protein; cervical cancer suppressor 3; elongation factor 1 alpha subunit; elongation factor Tu; epididymis secretory sperm binding protein; eukaryotic elongation factor 1 A-1; eukaryotic translation elongation factor 1 alpha 1-like 14; glucocorticoid receptor AF-1 specific elongation factor; leukocyte receptor cluster (LRC) member 7; leukocyte receptor cluster member 7; prostate tumor-inducing protein 1; translation elongation factor 1 alpha 1-like 14
Gene ID	1915
mRNA Refseq	NM_001402
Protein Refseq	NP_001393
MIM	130590
UniProt ID	P68104

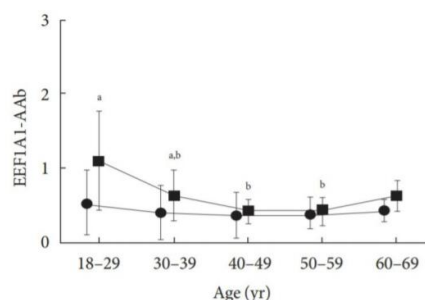
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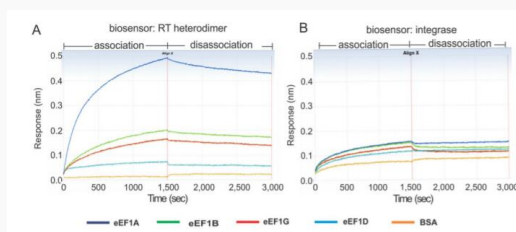
	Active RT (ng)	K _a (1/MS)	K _d (1/s)	K _d (nM)
WT RTp51/p66	1.06533 ± 0.67	136350 ± 4150	4.75E-4 ± 2.5E-5	3.4787 ± 0.079
E300R RTp51/p66	1.11267 ± 0.59	135400 ± 7000	1.39E-3 ± 1.9E-4	10.332 ± 1.561

A biolayer interferometry assay on the Octet Red machine determined the association (K_a) and dissociation (K_d) constants of purified wild-type (WT) and E300R mutant HIV-1 reverse transcriptase (RT) heterodimer with biotinylated eEF1A immobilized on a streptavidin-coated biosensor. The K_a is the rate of RT complex formation with eEF1A per second in a 1 M solution, and the K_d is the fraction of complexes decayed per second. The K_a divided by the K_d is the binding affinity (K_D).



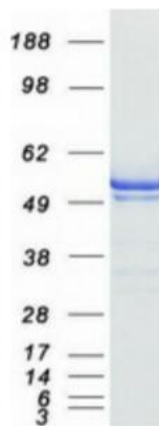
The mean levels of serum eEF1A1 autoantibody (eEF1A1-AAb) by age group in type 1 diabetes mellitus patients (squares) vs. non-diabetic control subjects (circles), as measured by ELISA using recombinant eEF1A1 (OriGene TP309697). a: significantly different compared to nondiabetic control subjects in each 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; $P < 0.05$).



Bioluminescence resonance imaging (BLI) of a biotinylated HIV RTp66/p51-loaded or integrase-loaded biosensor with 60 nM of purified eEF1A, eEF1B, eEF1D, eEF1G or BSA as analytes.

Coomassie blue staining of purified EEF1A1 protein.



The protein was produced from HEK293T cells transfected with EEF1A1 cDNA clone using MegaTran 2.0.

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