

## Recombinant Human EEF1A1 Protein, Myc/DDK-tagged

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

### SPECIFICATION

<b>Product Overview</b>	Recombinant protein of human eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) with C-terminal MYC/DDK tag, expressed in HEK293T cells.
<b>Species</b>	Human
<b>Source</b>	HEK293
<b>Description</b>	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.
<b>Molecular Mass</b>	50 kDa
<b>Purity</b>	>80% as determined by SDS-PAGE and Coomassie blue staining
<b>Applications</b>	ELISA capture for autoantibodies Biolayer interferometry (BLI) assay Binding assay
<b>Stability</b>	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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<b>Storage</b>	Store at -80 centigrade.
<b>Concentration</b>	>50 µg/mL as determined by microplate BCA method
<b>Storage Buffer</b>	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol
<b>GENE INFORMATION</b>	
<b>Gene Name</b>	EEF1A1 eukaryotic translation elongation factor 1 alpha 1 [ Homo sapiens (human) ]
<b>Official Symbol</b>	EEF1A1
<b>Synonyms</b>	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
<b>Gene ID</b>	1915
<b>mRNA Refseq</b>	NM_001402
<b>Protein Refseq</b>	NP_001393
<b>MIM</b>	130590
<b>UniProt ID</b>	P68104

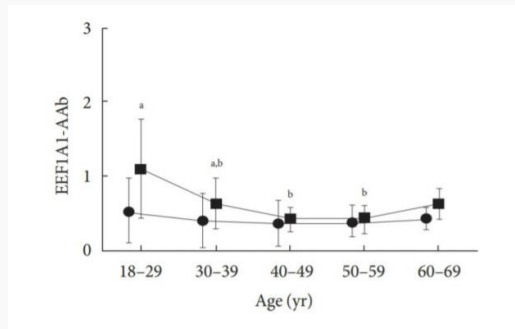
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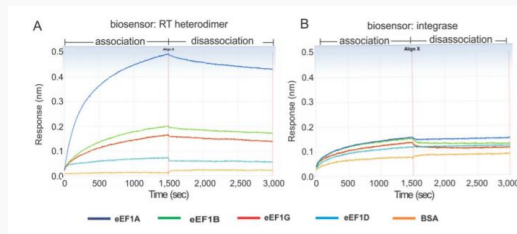
	Active RT (ng)	Ka (1/MS)	Kd (1/s)	K <sub>d</sub> (nM)
<b>WT RTp51/p66</b>	1.06533 ± 0.67	136350 ± 4150	4.75E-4 ± 2.5E-5	3.4787 ± 0.079
<b>E300R RTp51/p66</b>	1.11267 ± 0.59	135400 ± 7000	1.39E-3 ± 1.9E-4	10.332 ± 1.561

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 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).



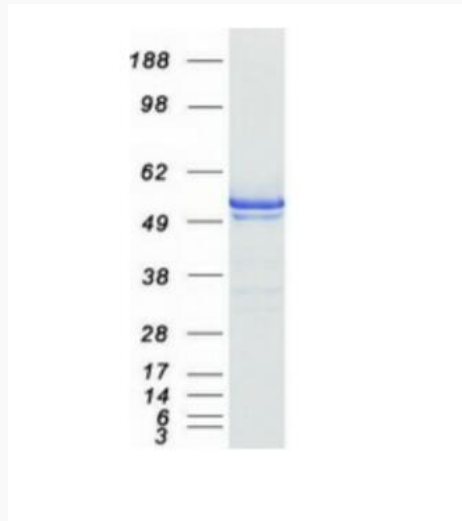
The mean levels of serum EEF1A1 autoantibody (EEF1A1-AAb) by age group in type 1 diabetes mellitus patients (squares) vs. non-diabetic control subjects (circles), as measured by ELISA using recombinant EEF1A1 (OriGene TP309697). a: significantly different compared to nondiabetic control subjects in each 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;  $P < 0.05$ ).




Bi-layer interferometry assays (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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