Product Data Sheet

Product Name:	eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) (387-394) [Multiple species]
Cat. No.:	GP10018

Chemical Properties

Cas. No.			
SMILES	NC(CC(C)C)C(NC(CCC(O)=O)C(NC(CC(O)=O)C(NCC(N(CCC1)C1C(NC(CCCCN)C(NC(CC2=CC=CC=C2)C(NC(CC(C)C)C(O)=O)=O)=O)=		
Formula	$C_{43}H_{67}N_9O_{13}$	M.Wt	918.04
Solubility	≥ 91.8mg/mL in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be 20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Background

Sequence: LEU-GLU-ASP-GLY-PRO-LYS-PHE-LEU

eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) 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[1].

There are two forms of eEF1A in eukaryotes, eEF1A1 and eEF1A2, both of which possess the same role in protein synthesis[2]. eEF1A2 was reported to be exclusively expressed in brain, heart, and skeletal muscle, whereas eEF1A1 is well known to be ubiquitously expressed[3].

tetraploid cells produced by impaired chromosomal condensation are eliminated by a novel type of cell death different from caspase-dependent apoptosis. The cell death was associated with downregulation of eukaryotic translation elongation factor-1 a 1 (eEF1A1/EF-1a) expression in conjunction with accumulation of its mRNA in processing bodies (P bodies). Importantly, expression of exogenous eEF1A1 was shown to inhibit the caspase-independent cell death, and a similar cell death was observed after inducing the expression of short hairpin RNA speci?c for eEF1A1[2].

References:
1. "Entrez Gene: EEF1A1 eukaryotic translation elongation factor 1 alpha 1"
2. Kahns S, LundA, Kristensen P, Knudsen CR, ClarkBF, Cavallius J et al. The elongationfactor 1 A-2 isoform from rabbit: cloning of the cDNA and characterization of the protein. Nucleic Acids Res 1998; 26: 1884-1890
3. Lee S, Francoeur AM, Liu S, Wang E. Tissue-specific expression in mammalian brain, heart, and muscle of S1, a member of the elongation factor-1 alpha gene family. J Biol Chem 1992; 267: 24064-24068.
4. Y Kobayashi and S Yonehara. Cell Death and Differentiation (2009) 16, 139-150

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA