Recombinant Human p16INK4a-TAT

Catalog # FL034

Product Specifications

Appearance	Sterile colorless liquid.
Purity	> 96% by SDS-PAGE or HPLC.
Endotoxin	< 0.01 EU/μg of rHuP16-INK4a-TAT protein as determined by LAL method.
Expression System	Expressed in E. coli.
Species	Human
Tag	Tag free.
Concentration	No less than 10mg/ml, The concentration for a specific batch as shown in the COA
Formulation	A 0.2 μm filtered concentrated solution in 20 mM PB, with 500 mM NaCl, 50% (v/v) Glycerol, pH 7.4.
Reconstitution	Before use this product, please read the direction below carefully. This vial must be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a sterile aqueous buffer to an appropriate concentration. Stock solutions should be a pportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.
Accession #	P42771 Met1-Asp156 with a 12-residue C-terminal TAT peptide
Amino acid sequence	MEPAAGSSMEPSADWLATAAARGRVEEVRALLEAGALPNAPNSYGRRPIQVMMMGSARVAELLLLHGAEPNCADPATLTR PVHDAAREGFLDTLVVLHRAGARLDVRDAWGRLPVDLAEELGHRDVARYLRAAAGGTRGSNHARIDAAEGPSDIPDGYGR KKRRQRRR
Molecular weight	Approximately 18.0 kDa, a single non-glycosylated polypeptide chain containing 167 amino acids.
Synonyms	CDK4I, MTS-1, p16INK4A
Stability & Storage	Shipped on wet ice. For long term storage, the product should be stored ≤ -20°C. Please avoid repeated freeze-thaw cycles afte r reconstitution. 36 months from date of receipt, -20 to -70°C as supplied. 1 month, 2 to 8°C under sterile conditions after reco nstitution. 3 months, -20 to -70°C under sterile conditions after reconstitution.
Precautions	Recombinant Human p16INK4a-TAT is for research use only and not for use in diagnostic or therapeutic procedures.

Background

Cyclin-dependent kinase inhibitors (CDKIs) are proteins that bind to and inhibit the activity of CDKs. Two major classes of CD K inhibitors have been identified. The p16 family (p15, p16, p18 and p19) binds to and inhibits the activities of CDK4 and CDK6 . The p21 family (p21, p27, p28 and p57) can bind to broad range of CDK-cyclin complexes and inhibit their activities. CDKIs are capable of suppressing growth, and several lines of evidence strongly suggest that at least some CDKIs may be tumor suppr essor proteins. p16-INK4A is the member of p16 family and is encoded by CDKN2A gene in humans. It has three isoforms, wh ich are wildly expressed but not detected in brain or skeletal muscle, except that isoform 3 is pancreas-specific. Full-length hum an p16INK4a shares 63% aa identity with mouse p16INK4a. Protein transduction using TAT fusion proteins represents an alter native methodology for introducing transcription factors and other nuclear proteins into primary, as well as transformed, cells. Recombinant Human p16-INK4a-TAT expressed in E. coli is an 18.0kDa protein containing 167 amino-acid residues, including the 155 residues of full-length p16-INK4a and a 12-residue C-terminal TAT peptide (GYGRKKRRQRRR) .

Validation Images