Recombinant Human Cyclin-Dependent Kinase Inhibitor 2A, Isoform 1

#R00535

Size: 10 μg/100 μg/500 μg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Cyclin-dependent kinase inhibitors (CDKIs) are proteins that bind to and inhibit the activity of CDKs. Two major classes of CDK 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 suppressor proteins.p16-INK4A is the member of p16 family and is encoded by CDKN2A gene in humans. It has three isoforms, which are wildly expressed but not detected in brain or skeletal muscle, except that isoform 3 is pancreas-specific. Defects in p16INK4A are a cause of Li-Fraumeni syndrome (LFS) and melanoma-astrocytoma syndrome (MASTS).

AA Sequence

MEPAAGSSMEPSADWLATAAARGRVEEVRALLEAGA
LPNAPNSYGRRPIQVMMMGSARVAELLLLHGAEPNC
ADPATLTRPVHDAAREGFLDTLVVLHRAGARLDVRDA
WGRLPVDLAEELGHRDVARYLRAAAGGTRGSNHARI
DAAEGPSDIPD

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Product Specification

Synonyms	CDK4I, MTS-1, p16INK4A
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 16.5 kDa, a single non-glycosylated polypeptide chain containing 156 amino acids.
Purity	> 96 % by SDS-PAGE and HPLC analyses.
Biological Activity	Data Not Available.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.
Endotoxin	Less than 1 EU/μg of rHuP16-INK4a as determined by LAL method.