

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

Information

Gene ID	
Accession #	
Alternate Names	CDK4I, MTS-1, p16INK4A
Source	Escherichia coli.
M.Wt	Approximately 16.5 kDa, a single non-glycosylated polypeptide chain containing 156 amino acids.
AA Sequence	MEPAAGSSME PSADWLATAA ARGRVEEVRA LLEAGALPNA PNSYGRRPIQ VMMMG SARVA ELLLLHGAEP NCADPATLTR PVHDAAREGF LDTLVVLHRA GARLDVRDAW GRLPVDLAE E LGHRDVARYL RAAAGGTRGS NHARIDAAEG PSDIPD
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
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
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
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.
Biological Activity	Data Not Available.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10µg	100µg	500µg
Recombinant Human Cyclin-Dependent Kinase Inhibitor 2A, Isoform 1	10µg	100µg	500µg

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

Quality Control

Purity	> 96 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/ μ g of rHuP16-INK4a as determined by LAL method.

Description

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 widely 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).

Reference

1. Buda G, Maggini V, Galimberti S, et al. 2007. Leuk Res, 31: 569-70
2. Komiya A, Suzuki H, Aida S, et al. 1995. Jpn J Cancer Res, 86: 622-5
3. Jares P, Fernandez PL, Nadal A, et al. 1997. Oncogene, 15: 1445-53
4. Mori T, Miura K, Aoki T, et al. 1994. Cancer Res, 54: 3396-7.

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