Datasheet

Cat. No. P1621

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

## Information

| | |
|---|---|
| Gene ID | |
| Accession # | |
| Alternate Names | CDK4I, MTS-1, p16INK4A |
| Source | Escherichia coli. |
| M.Wt | Approximately18.0 kDa, a single non-glycosylated polypeptide chain containing 167 amino acids. |
| AA Sequence | EPAAGSSMEP SADWLATAAA RGRVEEVRAL LEAGALPNAP NSYGRRPIQV MMMGSARVAE LLLLHGAEPN CADPATLTRP VHDAAREGFL DTLVVLHRAG ARLDVRDAWG RLPVDLAEEL GHRDVARYLR AAAGGTRGSN HARIDAAEGP SDIPDGYGRK KRRQRRR |
| Appearance | Sterile Filtered White lyophilized (freeze-dried) powder. |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles<br>- 12 months from date of receipt, -20 to -70 °C as supplied<br>- 1 month, 2 to 8 °C under sterile conditions after reconstitution<br>- 3 months, -20 to -70 °C under sterile conditions after reconstitution |
| Formulation | Lyophilized from a 0.2 μm filtered concentrated solution in 2 × PBS, pH 7.0. |
| 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 is 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 | 5μg | 100μg | 500μg |
|---|---|---|---|
| Recombinant Human Cyclin-Dependent Kinase Inhibitor 2A, Isoform 1-TAT | 5μg | 100μg | 500μg |

Use a manual defrost freezer and avoid repeated freeze-thaw cycles
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- 3 months, -20 to -70 °C under sterile conditions after reconstitution

## Quality Control

| | |
|---|---|
| Purity | > 95 % by SDS-PAGE and HPLC analyses. |
| Endotoxin | Less than 1 EU/μg of rHuP16-INK4a-TAT 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 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). The TAT transduction peptide can help rHuP16-INK4a with acrossing all kind of biomembranes in vivo and has no effect on the super structure of the protein.

## 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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