

## Recombinant Human CDKN2A protein

**Cat. No.** CDKN2A-10H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| <b>Product Overview</b> | Recombinant Human CDKN2A protein was expressed in Escherichia coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>ProteinLength</b>    | 156                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Description</b>      | <p>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).</p> |
| <b>Form</b>             | Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Molecular Mass</b>   | Approximately 16.5 kDa, a single non-glycosylated polypeptide chain containing 156 amino acids.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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|                       |                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>AA Sequence</b>    | MEPAAGSSMEPSADWLATAAARGRVEEVRLLEAGALPNAPNSYGRRPIQVMMMGSARVAELLLLHGAEPNCADPATLTRPVHDAAREGFLDTLVVLHRAGARLDVRDAWGRLPVDLAEELGHRDVARYLRAAAGGTRGSNHARIDAAEGPSDIPD                                                                                                                                                                                                                                 |
| <b>Endotoxin</b>      | Less than 1 EU/g of rHuP16-INK4a as determined by LAL method.                                                                                                                                                                                                                                                                                                                               |
| <b>Purity</b>         | >96% by SDS-PAGE and HPLC analysis.                                                                                                                                                                                                                                                                                                                                                         |
| <b>Storage</b>        | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.                                                                                             |
| <b>Reconstitution</b> | 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 centigrade. Further dilutions should be made in appropriate buffered solutions. |

## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | CDKN2A                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Official Symbol</b> | CDKN2A                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Synonyms</b>        | CDKN2A; cyclin-dependent kinase inhibitor 2A; CDKN2, cyclin dependent kinase inhibitor 2A (melanoma, p16, inhibits CDK4) , MLM; ARF; CDK4I; CMM2; INK4; INK4a; MTS1; p14; p16; p16INK4a; p19; p19Arf; CDK4 inhibitor p16-INK4; multiple tumor suppressor 1; cell cycle negative regulator beta; cyclin-dependent kinase 4 inhibitor A; cyclin-dependent kinase inhibitor 2A (melanoma, p16, inhibits CDK4); MLM; P14; P16; P19; TP16; CDKN2; INK4A; MTS-1; P14ARF; P19ARF; P16INK4; |

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P16INK4A; P16-INK4A;

**Gene ID** 1029

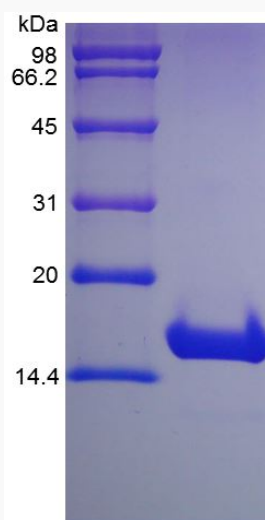
**mRNA Refseq** NM\_000077

**Protein Refseq** NP\_000068

**MIM** 600160

**UniProt ID** P42771

**SDS-PAGE of  
CDKN2A-10H**



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