

Recombinant Human p21 protein ab56278

[2 References](#) [2 Images](#)

Description

| | |
|--------------------------|-------------------------------|
| Product name | Recombinant Human p21 protein |
| Purity | > 80 % SDS-PAGE. |
| Expression system | Escherichia coli |
| Protein length | Full length protein |
| Animal free | No |
| Nature | Recombinant |
| Species | Human |
| Tags | GST tag N-Terminus |

Specifications

Our **Abpromise guarantee** covers the use of **ab56278** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| | |
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| Applications | Functional Studies SDS-PAGE Western blot |
| Form | Liquid |

Preparation and Storage

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| Stability and Storage | Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.0038% EGTA, 0.00174% PMSF, 0.00385% DTT, 0.79% Tris HCl, 0.00292% EDTA, 25% Glycerol (glycerin, glycerine), 0.87% Sodium chloride |
|------------------------------|--|

General Info

| | |
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| Function | May be the important intermediate by which p53/TP53 mediates its role as an inhibitor of cellular proliferation in response to DNA damage. Binds to and inhibits cyclin-dependent kinase activity, |
|-----------------|--|

preventing phosphorylation of critical cyclin-dependent kinase substrates and blocking cell cycle progression. Functions in the nuclear localization and assembly of cyclin D-CDK4 complex and promotes its kinase activity towards RB1. At higher stoichiometric ratios, inhibits the kinase activity of the cyclin D-CDK4 complex.

Tissue specificity

Expressed in all adult human tissues, with 5-fold lower levels observed in the brain.

Sequence similarities

Belongs to the CDI family.

Domain

The PIP-box K+4 motif mediates both the interaction with PCNA and the recruitment of the DCX(DTL) complex: while the PIP-box interacts with PCNA, the presence of the K+4 submotif, recruits the DCX(DTL) complex, leading to its ubiquitination.

The C-terminal is required for nuclear localization of the cyclin D-CDK4 complex.

Post-translational modifications

Phosphorylation of Thr-145 by Akt or of Ser-146 by PKC impairs binding to PCNA.

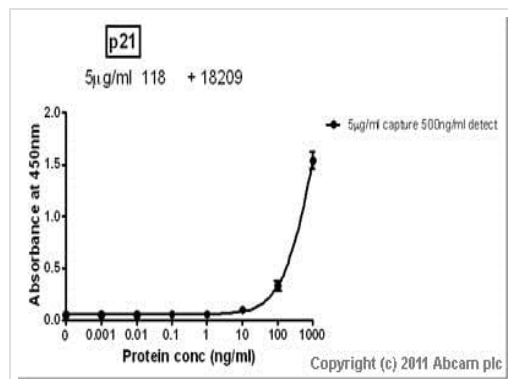
Phosphorylation at Ser-114 by GSK3-beta enhances ubiquitination by the DCX(DTL) complex.

Ubiquitinated by MKRN1; leading to polyubiquitination and 26S proteasome-dependent degradation. Ubiquitinated by the DCX(DTL) complex, also named CRL4(CDT2) complex, leading to its degradation during S phase or following UV irradiation. Ubiquitination by the DCX(DTL) complex is essential to control replication licensing and is PCNA-dependent: interacts with PCNA via its PIP-box, while the presence of the containing the 'K+4' motif in the PIP box, recruit the DCX(DTL) complex, leading to its degradation.

Cellular localization

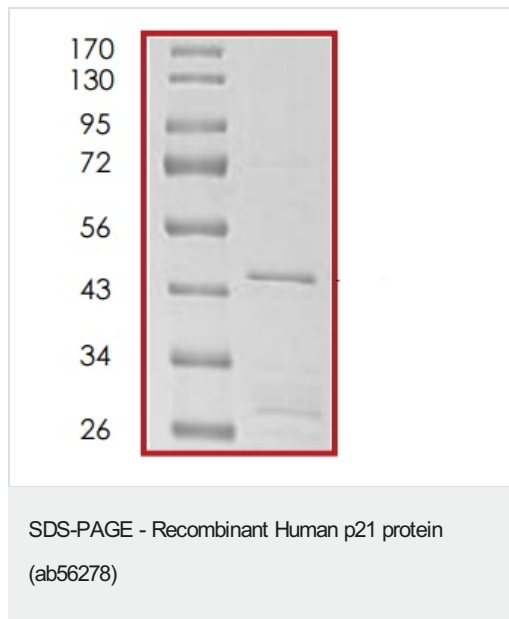
Cytoplasm. Nucleus.

Images



Standard curve for p21 (Analyte: ab56278); dilution range 1pg/ml to 1µg/ml using Capture Antibody Mouse monoclonal [AC8.3] to p21 (**ab118**) at 5µg/ml and Detector Antibody Rabbit polyclonal to p21 (**ab18209**) at 0.5µg/ml.

Sandwich ELISA - Recombinant Human p21 protein (ab56278)



SDS-PAGE analysis of ab56278 with molecular weight markers.
Approximate molecular weight 46kDa.

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