

Product datasheet

Anti-p21 antibody [HUGO291] ab107099

★★★★☆ 3 Abreviews 17 References 5 Images

Overview

Product name	Anti-p21 antibody [HUGO291]
Description	Rat monoclonal [HUGO291] to p21
Host species	Rat
Tested applications	Suitable for: WB, IHC-P
Species reactivity	Reacts with: Mouse, Human
Immunogen	Recombinant full length protein corresponding to p21. HIS-GST-mp21
Positive control	Mouse skin papilloma.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.4 Preservative: 0.05% Sodium azide Constituents: PBS, 1% BSA
Purity	IgG fraction
Clonality	Monoclonal
Clone number	HUGO291
Isotype	IgG2a

Applications

The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab107099 in the following tested applications.

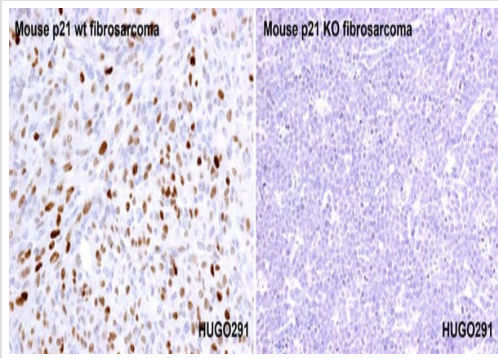
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/50. Predicted molecular weight: 18 kDa.
IHC-P	★★★★★ (1)	1/100.

Target

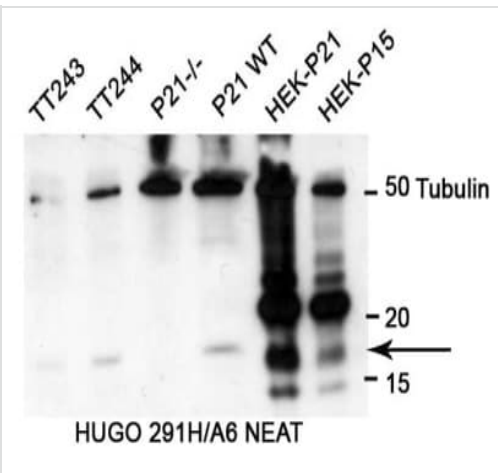
Function	May be the important intermediate by which p53/TP53 mediates its role as an inhibitor of cellular proliferation in response to DNA damage. Binds to and inhibits cyclin-dependent kinase activity, preventing phosphorylation of critical cyclin-dependent kinase substrates and blocking cell cycle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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-p21 antibody [HUGO291] (ab107099)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse p21WT fibrosarcoma and mouse p21KO fibrosarcoma tissue sections labeling p21 with ab107099.

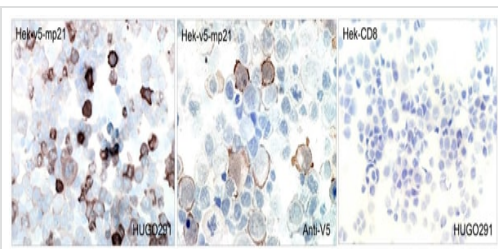


Western blot - Anti-p21 antibody [HUGO291] (ab107099)

All lanes : Anti-p21 antibody [HUGO291] (ab107099) at 1/50 dilution

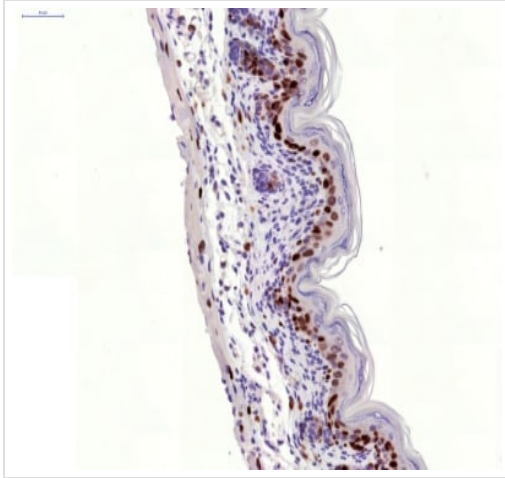
- Lane 1** : TT243 MEFs (non-irradiated) at 18.83 µg
- Lane 2** : TT243 MEFs (irradiated with 10 Gy) at 20.8 µg
- Lane 3** : p21-/- KO MEFs at 60 µg
- Lane 4** : P21 WT MEFs at 75 µg
- Lane 5** : HEK-V5-mp21 transfected cells at 20 µg
- Lane 6** : HEK-V5-mp15 transfected cells at 20 µg

Predicted band size: 18 kDa



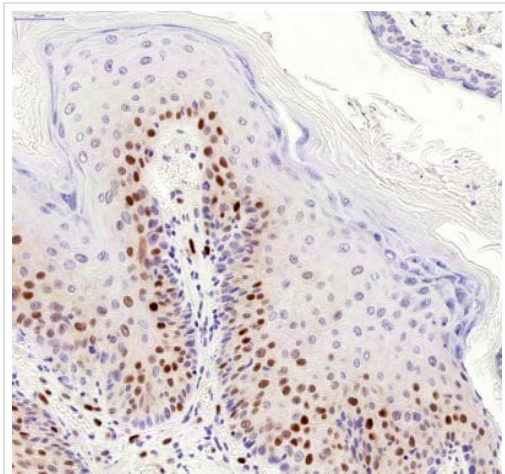
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-p21 antibody [HUGO291] (ab107099)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Hek-V5-mp21 transfected cells labelling p21 with ab107099. Nuclear staining was observed in Hek-V5-mp21 cytopins. Labeling with the anti-V5 mAb confirmed the efficiency of transfection. Cytopsin preparation of human CD8 was used as a negative control.



ab107099 at 1/100 staining p21 in conditional TRF1 knock out Mouse skin tissue by Immunohistochemistry.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-p21 antibody [HUGO291] (ab107099)



ab107099 at 1/100 staining p21 in Mouse skin papilloma tissue by Immunohistochemistry.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-p21 antibody [HUGO291] (ab107099)

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