bs-10129R **[Primary Antibody]**

CDKN1A/P21 Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 1026 **SWISS:** P38936

Target: CDKN1A/P21

Immunogen: KLH conjugated synthetic peptide derived from human P21: 21-100/164.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: This gene encodes a potent cyclin-dependent kinase inhibitor. The encoded protein binds to and inhibits the activity of cyclin-CDK2 or -CDK4 complexes, and thus functions as a regulator of cell cycle progression at G1. The expression of this gene is tightly controlled by the tumor suppressor protein p53, through which this protein mediates the p53-dependent cell cycle G1 phase arrest in response to a variety of stress stimuli. This protein can interact with proliferating cell nuclear antigen (PCNA), a DNA polymerase accessory factor, and plays a regulatory role in S phase DNA replication and DNA damage repair. This protein was reported to be specifically cleaved by CASP3-like caspases, which thus leads to a dramatic activation of CDK2, and may be instrumental in the execution of apoptosis following caspase activation. Two alternatively spliced variants, which encode an identical protein, have been reported. Two families of cyclin dependent kinase inhibitors (CKIs) have been identified. The p21WAF1/Cip1 family inhibits all kinases involved in the G1/S transition. The p16INK4a family inhibits Cdk4 and Cdk6 specifically.

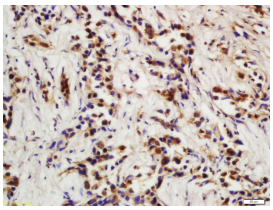
Applications: **IHC-P** (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)
Flow-Cyt (1μg/Test)
ICC/IF (1:100)

Reactivity: Human, Rat (predicted: Mouse, Cow, Chicken, Dog)

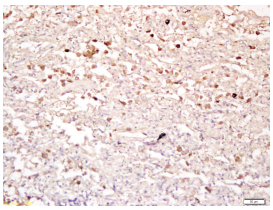
Predicted MW.: 18 kDa

Subcellular Location: Cytoplasm ,Nucleus

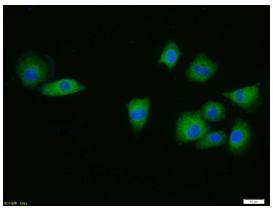
VALIDATION IMAGES



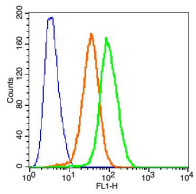
Tissue/cell: human hepatoma tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Incubation: Anti-P21 Polyclonal Antibody, Unconjugated(bs-10129R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Tissue/cell: human lung carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Incubation: Anti-P21 Polyclonal Antibody, Unconjugated(bs-10129R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Tissue/cell: HUVEC cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum, C-0005) at 37°C for 20 min; Antibody incubation with (CDKN1A/P21) Polyclonal Antibody, Unconjugated (bs-10129R) 1:100, 90 minutes at 37°C; followed by a conjugated Goat Anti-Rabbit IgG antibody (bs-0295G-FITC) at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei.



Blank control(blue): Hep G2 Cells(fixed with 2% paraformaldehyde (10 min) and then permeabilized with ice-cold 90% methanol for 30 min on ice). Primary Antibody: Rabbit Anti-TNFR1/FITC Conjugated antibody (bs-10129R /FITC), Dilution: 1μg in 100 μL 1X PBS containing 0.5% BSA; Isotype Control Antibody: Rabbit IgG/FITC(orange) ,used under the same conditions.

SELECTED CITATIONS

- **[IF=6.1]** Cuifang Chang. et al. The orphan GPR50 receptor interacting with TβRI induces G1/S-phase cell cycle arrest via Smad3-p27/p21 in BRL-3A cells. BIOCHEM PHARMACOL. 2022 Aug;202:115117 WB ;Rat. 35671788
- **[IF=3.56]** Tan, Shi, et al. "Musashi2 modulates K562 leukemic cell proliferation and apoptosis involving the MAPK pathway."?Experimental Cell Research?(2013). WB ;="Human". 24076374
- **[IF=4.4]** Wen Pan. et al. FOXG1 Improves Cognitive Function in Alzheimer's Disease by Promoting Endogenous Neurogenesis. FASEB J. 2025 Apr;39(9):e70582 IHC,IF,WB ;Mouse. 40297942
- **[IF=3.4]** Kramer Naomi E. et al. Insights into Brominated Flame Retardant Neurotoxicity: Mechanisms of Hippocampal Neural Cell Death and Brain Region-Specific Transcriptomic Shifts in Mice. TOXICOL SCI. 2024 Jul;: WB ;Mouse. 38995820
- **[IF=3.138]** Cho S et al. Enhanced Anticancer Effect of Adding Magnesium to Vitamin C Therapy: Inhibition of Hormetic Response by SVCT-2 Activation. Transl Oncol. 2019 Dec 31;13(2):401-409. WB ;Mouse&Human. 31901552