Human p21/CIP1/CDKN1A Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1047

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human p21 in Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human p21 Ser2-Pro164 Accession # P38936
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

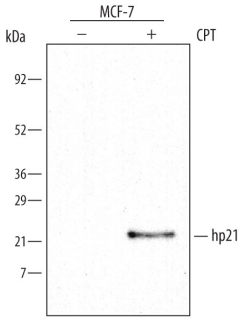
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.5 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Immunoprecipitation	1-2 µg/500 µg cell lysate	MCF-7 human breast cancer cell line, see our available Western blot detection antibodies
Intracellular Staining by Flow Cytometry	0.25 µg/10^6 cells	See Below
Simple Western	5 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

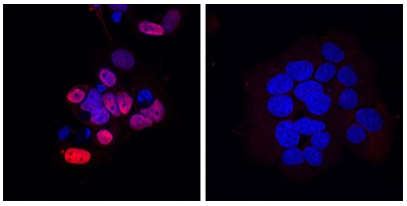
DATA

Western Blot



Detection of Human p21/CIP1/CDKN1A by Western Blot. Western blot shows lysates of MCF-7 human breast cancer cell line untreated (-) or treated (+) with 1 µM camptothecin (CPT) for 16 hours. PVDF membrane was probed with 0.5 µg/mL of Goat Anti-Human p21/CIP1/CDKN1A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1047), followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for p21/CIP1/CDKN1A at approximately 21 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



p21/CIP1/CDKN1A in MCF-7 Human Cell Line. p21/CIP1/CDKN1A was detected in immersion fixed MCF-7 human breast cancer cell line treated with (left panel) or without (right panel) camptothecin using Goat Anti-Human p21/CIP1/CDKN1A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1047) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to nuclei. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

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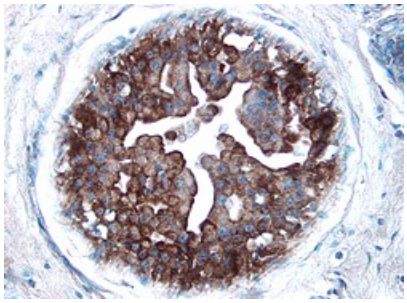
Human p21/CIP1/CDKN1A Antibody

Antigen Affinity-purified Polyclonal Goat IgG

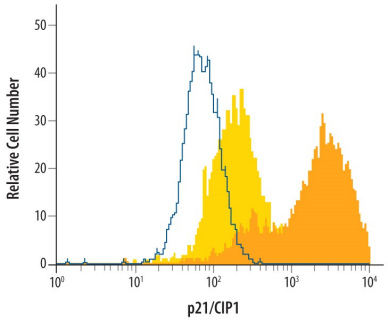
Catalog Number: AF1047

Immunohistochemistry



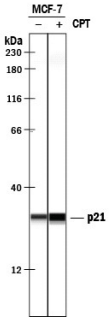
p21/CIP1/CDKN1A in Human Breast Cancer Tissue. p21/CIP1/CDKN1A was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using 1.7 µg/mL Goat Anti-Human p21/CIP1/CDKN1A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1047) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Intracellular Staining by Flow Cytometry



Detection of p21/CIP1/CDKN1A in MCF-7 Human Cell Line by Flow Cytometry. MCF-7 human breast cancer cell line was unstimulated (light orange filled histogram) or treated with 1 µM camphtothecin for 16 hours, then stained with Goat Anti-Human p21/CIP1/CDKN1A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1047, dark orange filled histogram) or isotype control antibody (Catalog # AB-108-C, open histogram), followed by Allophycocyanin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0108). To facilitate intracellular staining, cells were fixed with paraformaldehyde and permeabilized with methanol.

Simple Western



Detection of Human p21/CIP1/CDKN1A by Simple Western™. Simple Western lane view shows lysates of MCF-7 human breast cancer cell line untreated (-) or treated (+) with 1 µM Camptothecin (CPT) for 16 hours, loaded at 0.2 mg/mL. A specific band was detected for p21/CIP1/CDKN1A at approximately 30 kDa (as indicated) using 5 µg/mL of Goat Anti-Human p21/CIP1/CDKN1A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1047) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

p21CIP1, also called CIP1 (CDK-interacting protein 1) and CDKN1A, is a 21 kDa Cyclin/Cyclin-dependent kinase (Cdk) inhibitor that blocks cell cycle progression from G1 to S phase in the cell cycle. Because p21 is a transcriptional target of the p53 tumor suppressor, p21 expression increases in cells that contain stabilized p53 due to genotoxic stress exposure.

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