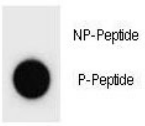
Phospho-p27Kip1 Thr170 Antibody / Phospho-CDKN1B Thr170 Polyclonal Antibody (F48819)

Catalog No.	Formulation	Size
F48819-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F48819-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Mouse, Hamster
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P46527
Applications	Dot blot: 1:500
Limitations	This Phospho-p27Kip1 Thr170 Antibody / Phospho-CDKN1B Thr170 Polyclonal Antibody is available for research use only.



Phospho-p27Kip1 Thr170 Antibody Dot Blot with Phosphorylated and Nonphosphorylated Peptides. Dot blot analysis using the Phospho-CDKN1B Thr170 Polyclonal Antibody to compare recognition of phosphorylated (P-Peptide) and nonphosphorylated (NP-Peptide) p27Kip1 peptides. Each dot contained 50 ng of peptide. Strong reactivity is observed with the phosphorylated peptide, with no appreciable signal from the nonphosphorylated control.

Description

The Phospho-p27Kip1 Thr170 Antibody / Phospho-CDKN1B Thr170 Polyclonal Antibody recognizes cyclin-dependent kinase inhibitor 1B phosphorylated at threonine 170. Encoded by the CDKN1B gene, p27Kip1 belongs to the Cip/Kip family of cyclin-dependent kinase inhibitors, which also includes p21 and p57. This protein regulates progression through

the G1 phase of the cell cycle by interacting with cyclin-CDK complexes. Its inhibitory effects on cyclin E-CDK2 and cyclin A-CDK2 help prevent premature entry into S phase, while interactions with cyclin D-CDK4/6 complexes contribute to their assembly and regulation.

p27 function is controlled by phosphorylation events that influence protein stability, intracellular localization, and interactions with regulatory partners. Phosphorylation at Thr187 promotes recognition by the SCF-SKP2 ubiquitin ligase complex, resulting in ubiquitination and proteasomal degradation. Phosphorylation at Thr157 has been associated with impaired nuclear import and cytoplasmic retention, while modification at Thr198 can influence protein stability and cytoplasmic functions. Together, these mechanisms allow extracellular growth signals and intracellular kinase pathways to regulate p27 activity during cell cycle progression.

Threonine 170 lies within the C-terminal regulatory region of human p27Kip1, outside the N-terminal domain responsible for many of its direct cyclin-CDK interactions. Although several phosphorylation sites in this region have established regulatory functions, the specific biological consequences of Thr170 phosphorylation remain comparatively poorly characterized. Detection of this modification may contribute to studies of CDKN1B phosphorylation patterns, but its presence alone does not establish changes in protein degradation, intracellular localization, or CDK inhibition.

Beyond cell cycle control, p27 contributes to cellular differentiation, quiescence, and tumor suppression. Reduced nuclear expression has been associated with increased proliferation and unfavorable clinical outcomes in several malignancies. Cytoplasmic p27 can also participate in actin cytoskeletal regulation and cell migration through interactions with Rho family signaling proteins. These diverse activities highlight the importance of understanding how individual phosphorylation events influence p27 behavior. NSJ Bioreagents offers this Phospho-p27Kip1 Thr170 Antibody for investigating a less extensively characterized modification of CDKN1B. The reagent has been evaluated using phosphorylated and nonphosphorylated peptides by dot blot, providing evidence of phosphopeptide recognition under the conditions tested.

For additional research options, explore our highly published p27Kip1 Antibody SX53G8, a well-established monoclonal antibody targeting CDKN1B.

Application Notes

Titration of the Phospho-p27Kip1 Thr170 Antibody / Phospho-CDKN1B Thr170 Polyclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

This phospho-p27Kip1 antibody was produced from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding pT170 of human p27Kip1.

Storage

Aliquot the phospho-p27Kip1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Phospho-p27 Thr170 antibody, Phospho-CDKN1B T170 antibody, Phospho-KIP1 Thr170 antibody, p27Kip1 phospho-Thr170 antibody

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