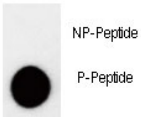
Phospho-p27Kip1 Thr157 Antibody / Phospho-CDKN1B Thr157 Polyclonal Antibody (F48428)

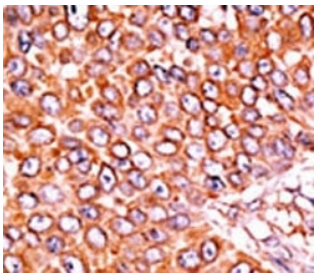
Catalog No.	Formulation	Size
F48428-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F48428-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P46527
Applications	Dot blot: 1:500 IHC (Paraffin): 1:50-1:100
Limitations	This Phospho-p27Kip1 Thr157 Antibody / Phospho-CDKN1B Thr157 Polyclonal Antibody is available for research use only.



Phospho-p27Kip1 Thr157 Antibody Dot Blot with Phosphorylated and Nonphosphorylated Peptides. Dot blot analysis using the Phospho-CDKN1B Thr157 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.



Phospho-p27Kip1 Thr157 Antibody IHC in Human Breast Carcinoma. Immunohistochemical staining of FFPE human breast carcinoma tissue using the Phospho-CDKN1B Thr157 Polyclonal Antibody. Predominantly cytoplasmic staining is observed in carcinoma cells, consistent with the reported association between Thr157 phosphorylation and cytoplasmic retention of p27Kip1.

Description

The Phospho-p27Kip1 Thr157 Antibody / Phospho-CDKN1B Thr157 Polyclonal Antibody recognizes cyclin-dependent kinase inhibitor 1B phosphorylated at threonine 157. Encoded by CDKN1B, p27Kip1 belongs to the Cip/Kip family of cell cycle regulatory proteins and helps control progression from G1 to S phase. Nuclear p27 inhibits cyclin E-CDK2 and cyclin A-CDK2 complexes, restricting cell cycle progression and coordinating proliferation with extracellular growth signals. Its abundance, phosphorylation state, and intracellular localization collectively determine its influence on cellular proliferation.

Threonine 157 is an important regulatory phosphorylation site within the human p27 protein. Located near a nuclear localization sequence, this residue can be phosphorylated by signaling kinases associated with growth factor responses, including AKT. Phosphorylation at Thr157 interferes with efficient nuclear import, promoting cytoplasmic retention of p27 and reducing its availability to inhibit nuclear cyclin-CDK complexes. This mechanism provides a connection between PI3K-AKT signaling and cell cycle regulation, particularly in cellular environments characterized by increased growth-promoting signaling.

Phosphorylation-dependent redistribution of p27 has important implications for cancer biology. Although p27 is traditionally considered a tumor suppressor because of its ability to restrain cell cycle progression, cytoplasmic accumulation can diminish this inhibitory function. Cytoplasmic p27 also participates in processes involving actin organization, Rho family GTPase signaling, and cell migration. Increased AKT activity and altered p27 localization have been investigated in several malignancies, including breast cancer, where disruption of nuclear cell cycle control may contribute to tumor progression.

Other phosphorylation events regulate p27 through distinct mechanisms. Phosphorylation at Thr187 promotes recognition by the SCF-SKP2 ubiquitin ligase complex and subsequent proteasomal degradation, while phosphorylation at Thr198 can influence protein stability and cytoplasmic functions. These regulatory pathways illustrate how individual phosphorylation sites can produce different biological consequences. Investigating Thr157 phosphorylation can therefore help distinguish signaling-associated changes in p27 localization from mechanisms controlling its degradation. NSJ Bioreagents offers this Phospho-p27Kip1 Thr157 Antibody for examining a regulatory modification associated with growth factor signaling, nuclear exclusion, and altered cell cycle control.

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 Thr157 Antibody / Phospho-CDKN1B Thr157 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 pT157 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 Thr157 antibody, Phospho-CDKN1B T157 antibody, Phospho-KIP1 Thr157 antibody, p27Kip1 phospho-Thr157 antibody

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