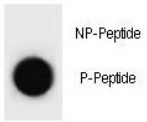
Phospho-p27Kip1 Thr197 Antibody / Phospho-CDKN1B Thr197 Polyclonal Antibody (F48820)

Catalog No.	Formulation	Size
F48820-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F48820-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

Species Reactivity	Mouse
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P46414
Applications	Dot blot: 1:500
Limitations	This Phospho-p27Kip1 Thr197 Antibody / Phospho-CDKN1B Thr197 Polyclonal Antibody is available for research use only.



Phospho-p27Kip1 Thr197 Antibody Dot Blot with Mouse p27 Phosphopeptides. Dot blot analysis using the Phospho-CDKN1B Thr197 Polyclonal Antibody to compare recognition of phosphorylated (P-Peptide) and nonphosphorylated (NP-Peptide) mouse 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 Thr197 Antibody / Phospho-CDKN1B Thr197 Polyclonal Antibody recognizes cyclin-dependent kinase inhibitor 1B phosphorylated at threonine 197 in mouse p27Kip1. This residue corresponds to threonine 198 in the human protein and represents a conserved C-terminal regulatory phosphorylation site. Encoded by CDKN1B, p27 belongs to the Cip/Kip family of cyclin-dependent kinase inhibitors and regulates progression through the G1 phase of the cell cycle. Its interactions with cyclin E-CDK2 and cyclin A-CDK2 complexes restrict cell cycle progression, while association with cyclin D-CDK4/6 complexes contributes to their assembly and regulation.

Phosphorylation at mouse Thr197 has been linked to AMP-activated protein kinase (AMPK) signaling, which coordinates cellular responses to changes in energy availability. Published studies have demonstrated that AMPK can phosphorylate murine p27 at this residue, promoting interactions with 14-3-3 proteins and increasing p27 stability. These findings establish a connection between metabolic signaling and the regulation of cell cycle inhibitory proteins. In contrast to phosphorylation at Thr187, which promotes SCF-SKP2-mediated ubiquitination and degradation, modification at the C-terminal Thr197 site can protect p27 from turnover under specific cellular conditions.

The corresponding human Thr198 residue has also been investigated in relation to AKT and RSK signaling. Phosphorylation at this site can influence p27 interactions with cyclin-CDK complexes, intracellular localization, and protein stability. RSK1-mediated phosphorylation has additionally been associated with increased binding to RhoA, reduced RhoA activity, and enhanced cell motility. These findings demonstrate that C-terminal phosphorylation can regulate both the cell cycle inhibitory and cytoskeletal functions of p27, although the consequences depend on cellular context and associated signaling pathways.

CDKN1B contributes to cellular quiescence, differentiation, and tumor suppression, making its phosphorylation-dependent regulation relevant to studies of proliferation and cancer biology. Altered p27 stability or localization can influence its ability to restrain CDK activity and participate in signaling processes outside the nucleus. NSJ Bioreagents offers this Phospho-p27Kip1 Thr197 Antibody for investigating a conserved regulatory modification associated with AMPK signaling and p27 stability. The antibody has been evaluated by phosphopeptide dot blot, supporting recognition of the targeted modification 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 Thr197 Antibody / Phospho-CDKN1B Thr197 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 pT197 of mouse p27Kip1.

Storage

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

Alternate Names

Phospho-p27 Thr197 antibody, Phospho-CDKN1B T197 antibody, Phospho-KIP1 Thr197 antibody, p27Kip1 phospho-Thr197 antibody

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