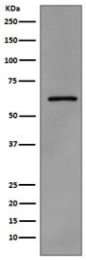
Phospho-Src Antibody (pY419) [clone DDH-19] (RQ5395)

Catalog No.	Formulation	Size
RQ5395	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.	100 ul

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	DDH-19
Purity	Affinity purified
UniProt	P12931
Applications	Western Blot : 1:500-1:2000
Limitations	This phospho-Src antibody (pY419) is available for research use only.



Western blot testing of lysate from human A431 cells, treated with pervanadate, with phospho-Src antibody (pY419). Predicted molecular weight: 55-60 kDa.

Description

Phospho-Src Antibody (pY419) targets Src when phosphorylated at tyrosine 419, a key regulatory modification associated with activation of the Src non-receptor tyrosine kinase. Src is encoded by the SRC gene and functions as a central signaling molecule that integrates signals from growth factor receptors, integrins, and other cell surface cues. Phosphorylation at tyrosine 419 within the activation loop of Src is widely recognized as a marker of Src kinase activation and signaling competency.

Functionally, Src plays a critical role in regulating cellular processes such as proliferation, survival, migration, and cytoskeletal organization. In its inactive state, Src adopts an autoinhibited conformation maintained by intramolecular interactions. Phosphorylation at tyrosine 419 disrupts this inhibitory configuration, enhancing catalytic activity and enabling Src to phosphorylate downstream substrates. A Phospho-Src Antibody (pY419) enables investigation of Src activation status and signaling dynamics in research studies focused on kinase regulation and signal transduction.

SRC expression is observed across many cell types, reflecting its involvement in fundamental signaling pathways. At the subcellular level, Src localizes primarily to the cytoplasmic face of the plasma membrane, where it associates with receptor complexes and adhesion structures. Activated Src, marked by phosphorylation at tyrosine 419, participates in signaling cascades that link extracellular stimuli to intracellular responses. Changes in pY419 levels can therefore reflect shifts in cellular signaling states and pathway activation.

At the molecular level, Src contains an SH3 domain, an SH2 domain, a kinase domain, and regulatory C-terminal regions that together control enzymatic activity and protein interactions. Phosphorylation of tyrosine 419 within the kinase domain stabilizes the active conformation of Src and promotes substrate phosphorylation. This modification is tightly regulated by upstream kinases and phosphatases, ensuring precise control of Src signaling output in response to environmental cues.

From a biological and disease relevance perspective, aberrant Src activation has been implicated in numerous pathological conditions, particularly cancer. Elevated phosphorylation of Src at tyrosine 419 has been associated with enhanced migratory and invasive behavior, altered cell adhesion, and dysregulated growth signaling. As a result, Src activation status is frequently examined in oncology and signal transduction research to understand mechanisms driving disease-associated cellular behavior.

Phospho-Src Antibody (pY419) reagents are valuable tools for studying kinase activation, signal transduction pathways, and phosphorylation-dependent regulation of Src. These antibodies support research into growth factor signaling, adhesion-mediated signaling, and disease-associated alterations in tyrosine kinase activity. NSJ Bioreagents provides Phospho-Src Antibody products intended for research use.

Application Notes

Optimal dilution of the phospho-Src antibody (pY419) should be determined by the researcher.

Immunogen

A synthetic peptide specific to human Src (surrounding pY419) was used as the immunogen for the phospho-Src antibody.

Storage

Store the phospho-Src antibody (pY419) at -20oC.