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# SRC Antibody (N-term)
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**
**Catalog # AX10010**

## Specification

### SRC Antibody (N-term) - Product Information

| | |
|---|---|
| Application | **IF, WB, IHC-P, FC,E** |
| Primary Accession | P12931 |
| Other Accession | P05480, NP_005408.1 |
| Reactivity | **Human** |
| Predicted | **Mouse** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Isotype | **Rabbit IgG** |
| Antigen Region | **24-52** |

### SRC Antibody (N-term) - Additional Information

**Gene ID** 6714

**Other Names**
Proto-oncogene tyrosine-protein kinase Src, Proto-oncogene c-Src, pp60c-src, p60-Src, SRC, SRC1

**Target/Specificity**
This SRC antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 24-52 amino acids from the N-terminal region of human SRC.

**Dilution**
IF~~1:50
WB~~1:2000
IHC-P~~1:50
FC~~1:50

**Format**
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**
SRC Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

### SRC Antibody (N-term) - Protein Information

**Name** SRC (HGNC:11283)

**Synonyms** SRC1

**Function** Non-receptor protein tyrosine kinase which is activated following engagement of many different classes of cellular receptors including immune response receptors, integrins and other adhesion receptors, receptor protein tyrosine kinases, G protein-coupled receptors as well as cytokine receptors. Participates in signaling pathways that control a diverse spectrum of biological activities including gene transcription, immune response, cell adhesion, cell cycle progression, apoptosis, migration, and transformation. Due to functional redundancy between members of the SRC kinase family, identification of the specific role of each SRC kinase is very difficult. SRC appears to be one of the primary kinases activated following engagement of receptors and plays a role in the activation of other protein tyrosine kinase (PTK) families. Receptor clustering or dimerization leads to recruitment of SRC to the receptor complexes where it phosphorylates the tyrosine residues within the receptor cytoplasmic domains. Plays an important role in the regulation of cytoskeletal organization through phosphorylation of specific substrates such as AFAP1. Phosphorylation of AFAP1 allows the SRC SH2 domain to bind AFAP1 and to localize to actin filaments. Cytoskeletal reorganization is also controlled through the phosphorylation of cortactin (CTTN) (Probable). When cells adhere via focal adhesions to the extracellular matrix, signals are transmitted by integrins into the cell resulting in tyrosine phosphorylation of a number of focal adhesion proteins, including PTK2/FAK1 and paxillin (PXN) (PubMed:21411625). In addition to phosphorylating focal adhesion proteins, SRC is also active at the sites of cell-cell contact adherens junctions and phosphorylates substrates such as beta-catenin (CTNNB1), delta-catenin (CTNND1), and plakoglobin (JUP). Another type of cell- cell junction, the gap junction, is also a target for SRC, which phosphorylates connexin-43 (GJA1). SRC is implicated in regulation of pre-mRNA-processing and phosphorylates RNA-binding proteins such as KHDRBS1 (Probable). Also plays a role in PDGF-mediated tyrosine phosphorylation of both STAT1 and STAT3, leading to increased DNA binding activity of these transcription factors (By similarity). Involved in the RAS pathway through phosphorylation of RASA1 and RASGRF1 (PubMed:11389730). Plays a role in EGF-mediated calcium- activated chloride channel activation (PubMed:18586953). Required for epidermal growth factor receptor (EGFR) internalization through phosphorylation of clathrin heavy chain (CLTC and CLTCL1) at 'Tyr- 1477'. Involved in beta-arrestin (ARRB1 and ARRB2) desensitization through phosphorylation and activation of GRK2, leading to beta- arrestin phosphorylation and internalization. Has a critical role in the stimulation of the CDK20/MAPK3 mitogen-activated protein kinase cascade by epidermal growth factor (Probable). Might be involved not only in mediating the transduction of mitogenic signals at the level of the plasma membrane but also in controlling progression through the cell cycle via interaction with regulatory proteins in the nucleus (PubMed:7853507). Plays an important role in osteoclastic bone resorption in conjunction with PTK2B/PYK2. Both the formation of a SRC- PTK2B/PYK2 complex and SRC kinase activity are necessary for this function. Recruited to activated integrins by PTK2B/PYK2, thereby phosphorylating CBL, which in turn induces the activation and recruitment of phosphatidylinositol 3-kinase to the cell membrane in a signaling pathway that is critical for osteoclast function (PubMed:8755529, PubMed:14585963). Promotes energy production in osteoclasts by activating mitochondrial cytochrome C oxidase (PubMed:12615910). Phosphorylates DDR2 on tyrosine residues, thereby promoting its subsequent autophosphorylation (PubMed:16186108). Phosphorylates RUNX3 and COX2 on tyrosine residues, TNK2 on 'Tyr-284' and CBL on 'Tyr-731' (PubMed:20100835, PubMed:21309750). Enhances RIGI- elicited antiviral signaling (PubMed:19419966). Phosphorylates PDPK1 at 'Tyr-9', 'Tyr-373' and 'Tyr-376' (PubMed:14585963). Phosphorylates BCAR1 at 'Tyr-128' (PubMed:22710723). Phosphorylates CBLC at multiple tyrosine residues, phosphorylation at 'Tyr-341' activates CBLC E3 activity (PubMed:20525694). Phosphorylates synaptic vesicle protein synaptophysin (SYP) (By similarity). Involved in anchorage-independent cell growth (PubMed:19307596). Required for podosome formation (By similarity). Mediates IL6 signaling by activating YAP1-NOTCH pathway to induce inflammation-induced epithelial regeneration (PubMed:25731159). Phosphorylates OTUB1, promoting deubiquitination of RPTOR (PubMed:35927303).

**Cellular Location**
Cell membrane; Lipid-anchor. Mitochondrion inner membrane. Nucleus. Cytoplasm, cytoskeleton. Cytoplasm, perinuclear region. Cell junction, focal adhesion. Note=Localizes to focal adhesion sites

following integrin engagement (PubMed:22801373). Localization to focal adhesion sites requires myristoylation and the SH3 domain (PubMed:7525268). Colocalizes with PDLIM4 at the perinuclear region, but not at focal adhesions (PubMed:19307596)

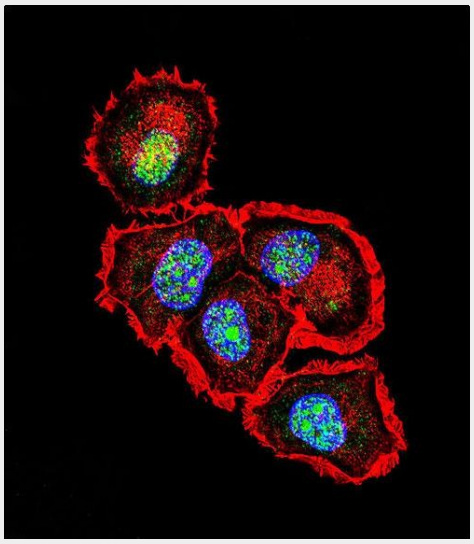
**Tissue Location**
Expressed ubiquitously. Platelets, neurons and osteoclasts express 5-fold to 200-fold higher levels than most other tissues [Isoform 2]: Expressed in brain.

## SRC Antibody (N-term) - Protocols

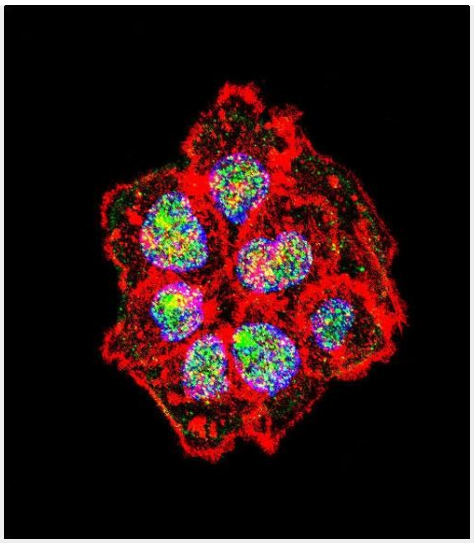
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

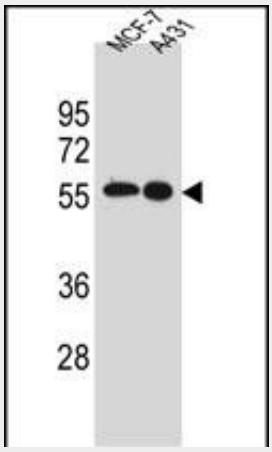
## SRC Antibody (N-term) - Images



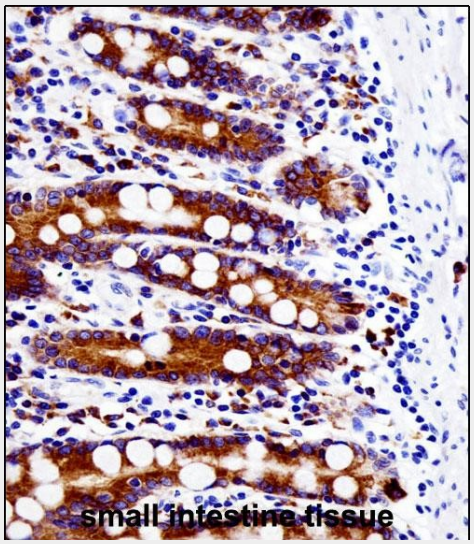
Confocal immunofluorescent analysis of SRC Antibody (N-term) with MCF-7 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red). DAPI was used to stain the cell nuclear (blue).



Confocal immunofluorescent analysis of SRC Antibody (N-term) with A431 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red). DAPI was used to stain the cell nuclear (blue).

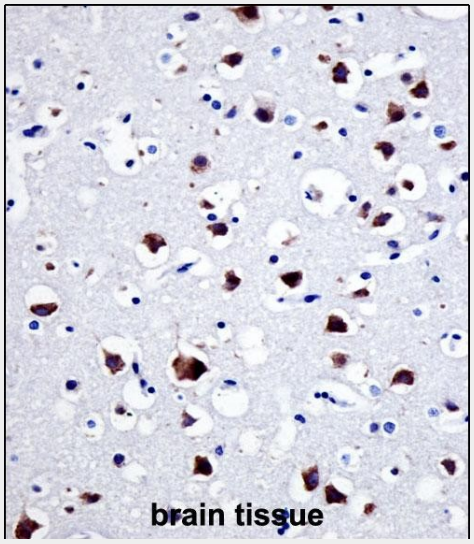



SRC Antibody (N-term) (Cat. #AX10010) western blot analysis in MCF-7,A431 cell line lysates (35ug/lane).This demonstrates the SRC antibody detected the SRC protein (arrow).

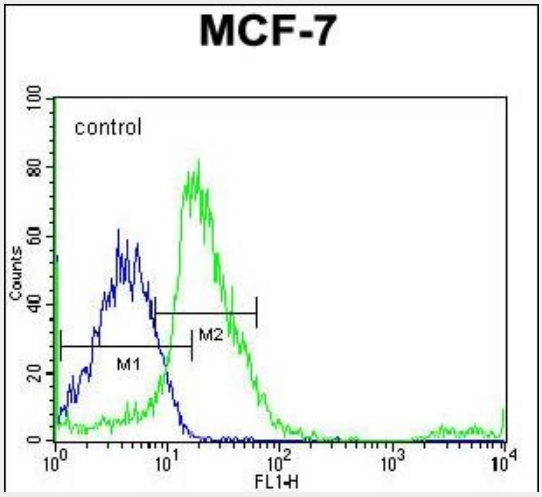



SRC Antibody (N-term) immunohistochemistry analysis in formalin fixed and paraffin embedded

human small intestine tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of SRC Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.




SRC Antibody (N-term) immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of SRC Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.




SRC Antibody (N-term) flow cytometric analysis of MCF-7 cells (right histogram) compared to a negative control cell (left histogram).Alexa Fluor 488-conjugated donkey anti-rabbit IgG secondary antibodies were used for the analysis.

**SRC Antibody (N-term) - Background**

This gene is highly similar to the v-src gene of Rous sarcoma virus. This proto-oncogene may play a role in the regulation of embryonic development and cell growth. The protein encoded by this gene is a tyrosine-protein kinase whose activity can be inhibited by phosphorylation by c-SRC kinase. Mutations in this gene could be involved in the malignant progression of colon cancer. Two transcript variants encoding the same protein have been found for this gene.

**SRC Antibody (N-term) - References**

Pradhan, S., et al. J. Biol. Chem. 285(38):29059-29068(2010) Dergai, M., et al. Biochem. Biophys.

Res. Commun. 399(2):307-312(2010) Liu, H., et al. J. Biol. Chem. 285(29):21934-21942(2010) Pene-Dumitrescu, T., et al. J. Biol. Chem. 285(28):21446-21457(2010) Liu, X., et al. Acta Biochim. Biophys. Sin. (Shanghai) 42(7):496-501(2010)