

Mouse Anti-SRC antibody

SLM-33434M

Product Name	SRC
Chinese Name	src 原癌基因单克隆抗体
Alias	ASV; Avian sarcoma virus; c SRC; CDNA FLJ14219 fis clone NT2RP3003800 highly similar to Rattus norvegicus tyrosine protein kinase pp60 c src mRNA; cSrc; EC 2.7.10.2; Neuronal CSRC tyrosine specific protein kinase; Neuronal SRC; Oncogene SRC; OTTHUMP00000030931; OTTHUMP00000174476; OTTHUMP00000174477; p60 Src; p60-Src; p60Src; pp60c src; pp60c-src; pp60csrc; Proto oncogene tyrosine protein kinase Src; Proto-oncogene c-Src; Proto-oncogene tyrosine-protein kinase Src; Protooncogene SRC; protooncogene SRC Rous sarcoma; Src; SRC Oncogene; SRC_HUMAN; SRC1; Tyrosine kinase pp60c src; Tyrosine protein kinase SRC 1; Tyrosine protein kinase SRC1; v src avian sarcoma (Schmidt Ruppin A2) viral oncogene homolog; V src sarcoma (Schmidt Ruppin A 2) viral oncogene homolog (avian); v src sarcoma (Schmidt Ruppin A 2) viral oncogene homolog avian; vsrc avian sarcoma (Schmidt Ruppin A2) viral oncogene homolog.
Research Area	Tumour Chromatin and nuclear signals Signal transduction transcriptional regulatory factor Kinases and Phosphatases
Immunogen Species	Mouse
Clonality	Monoclonal
Clone NO.	3D7
React Species	Human, Mouse, (predicted: Rat,) WB=1:500-2000
Applications	not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	61kDa
Cellular localization	The nucleus cytoplasmic The cell membrane
Form	Liquid
Concentration	1mg/ml

immunogen	KLH conjugated synthetic peptide derived from human SRC
Lsotype	IgG1
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed 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. [provided by RefSeq, Jul 2008]
Product Detail	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). 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). 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. Also plays a role in PDGF-mediated tyrosine phosphorylation of both STAT1 and STAT3, leading to increased DNA binding activity of these transcription factors. Involved in the RAS pathway through phosphorylation of RASA1 and RASGRF1. Plays a role in EGF-mediated calcium-activated chloride channel activation. 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 ADRBK1, 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. 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. 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. Promotes energy production in osteoclasts by activating mitochondrial cytochrome C oxidase. Phosphorylates DDR2 on tyrosine residues, thereby promoting its subsequent autophosphorylation. Phosphorylates RUNX3 and COX2 on tyrosine residues, TNK2 on 'Tyr-284' and CBL on 'Tyr-731'. Enhances DDX58/RIG-I-elicited antiviral signaling. Phosphorylates PDPK1 at 'Tyr-9', 'Tyr-373' and 'Tyr-376'. Phosphorylates BCAR1 at 'Tyr-132'.

Subunit:

Interacts with CDCP1, PELP1, TGFB1I1 and TOM1L2. Interacts with DDEF1/ASAP1 via its SH3 domain. Interacts with CCPG1. Interacts with the cytoplasmic domain of MUC1, phosphorylates it and increases binding of MUC1 with beta-catenin.

Subcellular Location:

Cell membrane. Mitochondrion inner membrane. Nucleus. Cytoplasm, cytoskeleton. Note=Localizes to focal adhesion sites after integrin engagement. Localization to focal adhesion sites requires myristoylation and the SH3 domain.

Tissue Specificity:

Expressed ubiquitously. Platelets, neurons and osteoclasts express 5-fold to

200-fold higher levels than most other tissues.

DISEASE:

Myristoylated at Gly-2, and this is essential for targeting to membranes. Dephosphorylated at Tyr-535 by PTPRJ. Phosphorylated on Tyr-535 by c-Src kinase (CSK). The phosphorylated form is termed pp60c-src. Dephosphorylated by PTPRJ at Tyr-424. Normally maintained in an inactive conformation with the SH2 domain engaged with Tyr-535, the SH3 domain engaged with the SH2-kinase linker, and Tyr-424 dephosphorylated. Dephosphorylation of Tyr-535 as a result of protein tyrosine phosphatase (PTP) action disrupts the intramolecular interaction between the SH2 domain and Tyr-535, Tyr-424 can then become autophosphorylated, resulting in SRC activation. Phosphorylation of Tyr-535 by CSK allows this interaction to reform, resulting in SRC inactivation. CDK5-mediated phosphorylation at Ser-74 targets SRC to ubiquitin-dependent degradation and thus leads to cytoskeletal reorganization. Phosphorylated by PTK2/FAK1; this enhances kinase activity. Phosphorylated by PTK2B/PYK2; this enhances kinase activity. S-nitrosylation is important for activation of its kinase activity. Ubiquitinated in response to CDK5-mediated phosphorylation.

Similarity:

Belongs to the protein kinase superfamily. Tyr protein kinase family. SRC subfamily.
Contains 1 protein kinase domain.

SWISS:

P12931

Gene ID:

6714

Database links:

[Entrez Gene: 6714](#) Human

[Entrez Gene: 20779](#) Mouse

[Entrez Gene: 83805](#) Rat

[Omim: 190090](#) Human

[SwissProt: P12931](#) Human

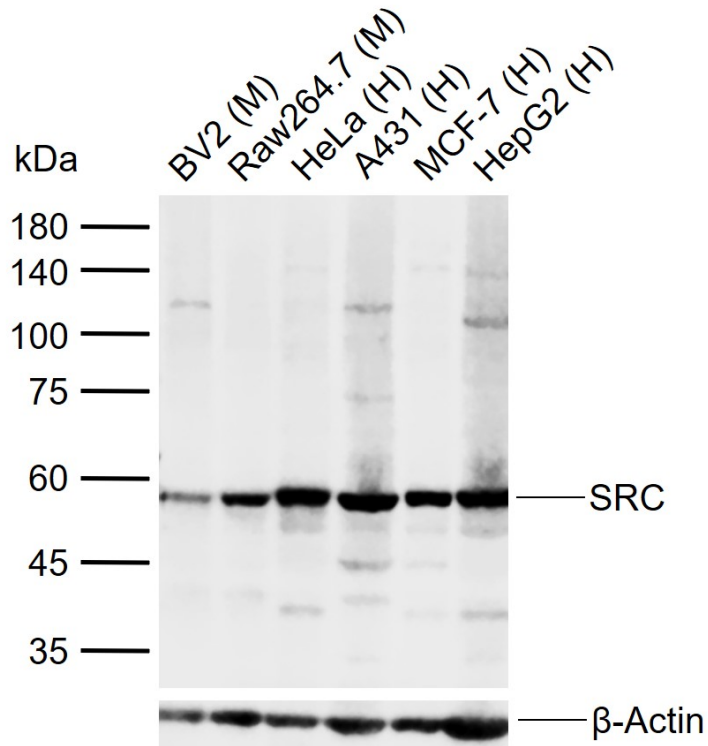
[SwissProt: P05480](#) Mouse

[SwissProt: Q9WUD9](#) Rat

[Unigene: 195659](#) Human

[Unigene: 112600](#) Rat

Product Picture



Sample:

Lane 1: Mouse BV2 cell lysates

Lane 2: Mouse Raw264.7 cell lysates

Lane 3: Human HeLa cell lysates

Lane 4: Human A431 cell lysates

Lane 5: Human MCF-7 cell lysates

Lane 6: Human HepG2 cell lysates



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Primary: Anti-SRC (SLM-33434M) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Mouse IgG at 1/20000 dilution

Predicted band size: 61 kDa

Observed band size: 58 kDa