

Rabbit Bi-Phospho-Syk (Y525/526) Polyclonal Antibody | anti-SYK antibody

Bi-Phospho-Syk (Y525/526) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA284280	Rabbit	Human (Predicted Reactivity: Mouse, Rat, Pig)	Immunohistochemistry, ELISA, Western Blot

PRODUCT SYNONYMS

Bi-Phospho-Syk (Y525/526); Polyclonal Antibody; Bi-Phospho-Syk (Y525/526) Antibody; Tyrosine-protein kinase SYK; Spleen tyrosine kinase; p72-Syk; SYK; anti-SYK antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human (Predicted Reactivity: Mouse, Rat, Pig)
Clonality	Polyclonal
Isotype	IgG
Specificity	This Syk Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding Y525/526 of human Syk.
Purity/Purification	This antibody is purified through a protein A column, followed by peptide affinity purification.
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide.
Sequence Length	612
Applicable Applications for anti-SYK antibody	IHC (Immunohistochemistry), ELISA, WB (Western Blot)

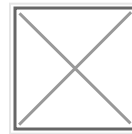
Function	Non-receptor tyrosine kinase which mediates signal transduction downstream of a variety of transmembrane receptors including classical immunoreceptors like the B-cell receptor (BCR). Regulates several biological processes including innate and adaptive immunity, cell adhesion, osteoclast maturation, platelet activation and vascular development. Assembles into signaling complexes with activated receptors at the plasma membrane via interaction between its SH2 domains and the receptor tyrosine-phosphorylated ITAM domains. The association with the receptor can also be indirect and mediated by adapter proteins containing ITAM or partial hemITAM domains. The phosphorylation of the ITAM domains is generally mediated by SRC subfamily kinases upon engagement of the receptor. More rarely signal transduction via SYK could be ITAM-independent. Direct downstream effectors phosphorylated by SYK include VAV1, PLCG1, PI-3-kinase, LCP2 and BLNK. Initially identified as essential in B-cell receptor (BCR) signaling, it is necessary for the maturation of B-cells most probably at the pro-B to pre-B transition. Activated upon BCR engagement, it phosphorylates and activates BLNK an adapter linking the activated BCR to downstream signaling adapters and effectors. It also phosphorylates and activates PLCG1 and the PKC signaling pathway. It also phosphorylates BTK and regulates its activity in B-cell antigen receptor (BCR)-coupled signaling. In addition to its function downstream of BCR plays also a role in T-cell receptor signaling. Plays also a crucial role in the innate immune response to fungal, bacterial and viral pathogens. It is for instance activated by the membrane lectin CLEC7A. Upon stimulation by fungal proteins, CLEC7A together with SYK activates immune cells inducing the production of ROS. Also activates the inflammasome and NF-kappa-B-mediated transcription of chemokines and cytokines in presence of pathogens. Regulates neutrophil degranulation and phagocytosis through activation of the MAPK signaling cascade (By similarity). Required for the stimulation of neutrophil phagocytosis by IL15 (PubMed:). Also mediates the activation of dendritic cells by cell necrosis stimuli. Also involved in mast cells activation. Involved in interleukin-3/IL3-mediated signaling pathway in basophils (By similarity). Also functions downstream of receptors mediating cell adhesion. Relays for instance, integrin-mediated neutrophils and macrophages activation and P-selectin receptor/SELPG-mediated recruitment of leukocytes to inflammatory loci. Plays also a role in non-immune processes. It is for instance involved in vascular development where it may regulate blood and lymphatic vascular separation. It is also required for osteoclast development and function. Functions in the activation of platelets by collagen, mediating PLCG2 phosphorylation and activation. May be coupled to the collagen receptor by the ITAM domain-containing FCER1G. Also activated by the membrane lectin CLEC1B that is required for activation of platelets by PDPN/podoplanin. Involved in platelet adhesion being activated by ITGB3 engaged by fibrinogen. Together with CEACAM20, enhances production of the cytokine CXCL8/IL-8 via the NFkB pathway and may thus have a role in the intestinal immune response (By similarity).
Cellular Location	Cell membrane. Cytoplasm, cytosol
Tissue Location	Widely expressed in hematopoietic cells (at protein level) (PubMed:8163536). Expressed in neutrophils (at protein level) (PubMed:15123770). Within the B-cell compartment, expressed from pro- and pre-B cells to plasma cells (PubMed:8163536).
Preparation and 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.

IMAGES



IHC (Immunohistochemistry)

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



WB (Western Blot)

Western blot analysis of lysates from Raji cell line, untreated or treated with TPA, 200nM, 30min, using (AAA284280) (upper) or Tubulin (lower).

ADDITIONAL INFORMATION

Related Product Information for anti-SYK antibody	Syk is a positive effector of BCR-stimulated responses. This protein couples the B-cell antigen receptor (BCR) to the mobilization of calcium ion either through a phosphoinositide 3-kinase-dependent pathway, when not phosphorylated on tyrosines of the linker region, or through a phospholipase C-gamma-dependent pathway, when phosphorylated on Tyr-342 and Tyr-346. Thus the differential phosphorylation of Syk can determine the pathway by which BCR is coupled to the regulation of intracellular calcium ion.
Product Categories/Family for anti-SYK antibody	Cardiovascular ; Immunology ; Signal Transduction ; Phospho Antibodies

References	Steinberg, M., et al., Blood 104(3):760-767 (2004). Wang, S., et al., World J. Gastroenterol. 10(12):1815-1818 (2004). Hayes, M.J., et al., Mol. Immunol. 41(4):457-468 (2004). Arndt, P.G., et al., J. Biol. Chem. 279(12):10883-10891 (2004). Ding, Y.B., et al., Zhonghua Yi Xue Za Zhi 84(4):290-293 (2004).
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NCBI AND UNIPROT INFORMATION

NCBI GI #	205277435
NCBI GeneID	6850
NCBI Accession #	NP_001128524.1; NP_001167638.1; NP_001167639.1; NP_003168.2
NCBI GenBank Nucleotide #	NM_001135052.3
UniProt Accession #	P43405
NCBI Official Full Name	tyrosine-protein kinase SYK isoform Syk(S)
NCBI Official Synonym Full Names	spleen tyrosine kinase
NCBI Official Symbol	SYK
NCBI Official Synonym Symbols	p72-Syk
NCBI Protein Information	tyrosine-protein kinase SYK
UniProt Protein Name	Tyrosine-protein kinase SYK
UniProt Gene Name	SYK
UniProt Entry Name	KSYK_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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 Online datasheet: <https://stage.aaabiotech.com/polyclonal/bi-phospho-syk-y525-526-antibody-immunohistochemistry-western-blot-elisa/284280>