

## Technical Data Sheet

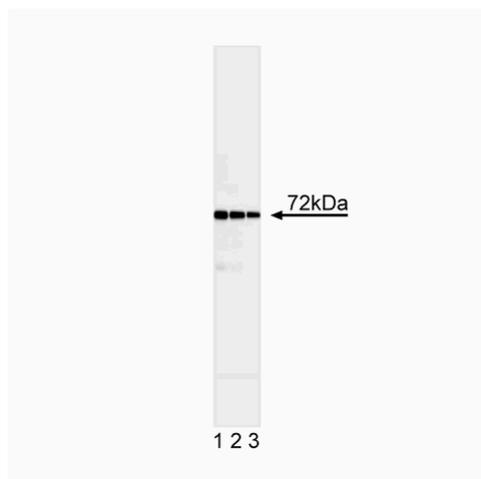
## Purified Mouse Anti-Human Syk

## Product Information

<b>Material Number:</b>	<b>551816</b>
<b>Size:</b>	50 µg
<b>Reactivity:</b>	QC Testing: Human
<b>Component:</b>	<b>51-16626N</b>
<b>Description:</b>	EB1 Control Lysate
<b>Size:</b>	50 µg (1 ea)
<b>Storage Buffer:</b>	SDS-PAGE buffer (62mM Tris pH 6.8, 2% SDS, 0.9% b-mercaptoethanol, 0.003% bromophenol blue, 5% glycerol)
<b>Component:</b>	<b>51-8116GR</b>
<b>Description:</b>	Purified Mouse Anti-Human Syk
<b>Size:</b>	50 µg (1 ea)
<b>Clone Name:</b>	4D10
<b>Immunogen:</b>	Human Syk peptide aa. 314-339
<b>Isotype:</b>	Mouse IgG2a, κ
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

## Description

Syk is a member of the family of non-receptor type protein-tyrosine kinases and plays a crucial role in lymphocyte signaling and development. Syk is expressed in all haematopoietic cells and contributes to the signal transduction process by binding to a tyrosine-based activation motif (ITAM) of immune receptors, including Igα, TCRζ, CD3ε, FcεRIβ, and FcεRIγ. Upon receptor activation, Syk binds to phosphorylated ITAMs via its two N-terminal SH2 domains thereby activating Syk and causing tyrosines in Syk to undergo auto-phosphorylation or phosphorylation. These phosphorylated sites can act as binding sites for other signaling molecules or help to regulate enzymatic activity. For example, in mast cells, Syk can activate downstream targets such as phospholipase Cγ1 and VAV. Studies in Syk<sup>-/-</sup> mast cells identified defects in both the ERK-MAP and JNK-MAP kinase pathways. Syk migrates as 72 kDa in SDS/PAGE. (Predicted MW from SWISS-PROT is 72 kDa; Accession number P43405).



**Western blot analysis of Syk.** Lysate from EB1 cells was probed with anti-Syk (clone 4D10) at concentrations of 0.125 (lane 1), 0.063 (lane 2), and 0.031 µg/ml (lane 3). Syk is identified as a band of ~72 kDa.

## Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20°C.

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## Application Notes

### Application

Western blot	Routinely Tested
Flow cytometry	Tested During Development

### Recommended Assay Procedure:

**Western Blot:** EB1 control lysate [50 µg (1 µg/ml)] is provided as a positive control (store lysate at -20°C).

**Additional application:** The FITC-conjugated format of clone 4D10 is useful in immunofluorescent staining and flow cytometric analysis. Cat. No. 552476 is recommended for use in flow cytometry.

### Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

### Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [www.bdbiosciences.com/pharming/en/protocols](http://www.bdbiosciences.com/pharming/en/protocols) for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

### References

Chu DH, van Oers NS, Malissen M, Harris J, Elder M, Weiss A. Pre-T cell receptor signals are responsible for the down-regulation of Syk protein tyrosine kinase expression. *J Immunol.* 1999; 163(5):2610-2620.(Immunogen: Flow cytometry, Western blot)  
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Latour S, Veillette A. Proximal protein tyrosine kinases in immunoreceptor signaling. *Curr Opin Immunol.* 2001; 13:299-306.(Biology)  
Turner M, Schweighoffer E, Colucci F, Di Santo JP, Tybulewicz VL. Tyrosine kinase SYK; essential functions for immunoreceptor signaling. *Immunol Today.* 2000; 21:148-154.(Biology)