

## Technical Data Sheet

## Purified Rat Anti-Mouse Syndecan-4

## Product Information

<b>Material Number:</b>	<b>550350</b>
<b>Size:</b>	0.1 mg
<b>Concentration:</b>	0.5 mg/ml
<b>Clone:</b>	KY/8.2
<b>Immunogen:</b>	BCB10 mouse pre-B cell line
<b>Isotype:</b>	Rat (WI) IgG2a, $\kappa$
<b>Reactivity:</b>	QC Testing: Mouse
<b>Storage Buffer:</b>	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

## Description

The KY/8.2 mAb reacts with mouse syndecan-4, a cell-surface heparan sulfate proteoglycan. Although the ligand(s) for this molecule is unknown, syndecans are known to interact with the heparin-binding domain of growth factors, chemokines, and extracellular matrix components. Accordingly, heparin inhibits the binding of syndecan-4 to the pre-B cell line BC7.12. Syndecan-4 is localized to focal adhesions and binds protein-kinase C $\alpha$ . Thus, it is involved in cytoskeletal organization and signaling. Syndecan-4 is expressed on stromal cells and B-lymphocyte precursors in bone marrow, in addition to most splenic B cells and a small population of T lymphocytes. It is highly expressed on activated B lymphocytes, but is downregulated in isotype-switched memory B cells. The ectodomain of syndecan-4 is shed from cell surfaces constitutively and in response to specific physiological signals, and the resulting soluble fragments are functional. Immobilized KY/8.2 mAb induced the formation of dendritic processes on syndecan-4-transfected cells and on anti-CD40-activated splenic B cells. Other methods of activating B cells have not produced the same effect. This antibody recognizes an epitope in the N-terminus of syndecan-4, regardless of post-translational modifications.

## Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Store undiluted at 4° C.

## Application Notes

## Application

Flow cytometry	Routinely Tested
ELISA	Reported

## Recommended Assay Procedure:

We recommend the use of Mouse Fc Block™ (anti-mouse CD16/CD32, mAb 2.4G2, Cat. No. 553141/553142) to reduce non-specific staining. For staining in the presence of Mouse Fc Block™, the second-step antibody must not recognize the 2.4G2 antibody (rat IgG2b,  $\kappa$ ). Therefore, we recommend biotinylated mouse anti-rat IgG2a (Cat. no. 553894) as a secondary antibody, followed by Streptavidin-PE (Cat. No. 554061).

## Suggested Companion Products

Catalog Number	Name	Size	Clone
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
554061	PE Streptavidin	0.5 mg	(none)
553894	Biotin Mouse Anti-Rat IgG2a	0.5 mg	RG7/1.30

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [www.bdbiosciences.com/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/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.

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## References

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