Technical Data Sheet

Biotin Mouse Anti-Mouse CD178.1

Product Information

Material Number:	**553853**
Alternate Name:	mFasL.1, CD95 Ligand
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	KAY-10
Immunogen:	Transfected Cell Line
Isotype:	Mouse (C57BL/6) IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The Kay-10 antibody reacts with CD178.1, the Fas Ligand alloantigen (mFasL.1, CD95 Ligand) expressed on activated T lymphocytes of selected strains of mice (eg, C57BL/6, C3H, MRL, NOD, NZB, NZW, and SJL). It does not react with similarly activated T blasts from BALB/c, DBA/1, or DBA/2 mice. It also reacts with Cos cells transfected with *mFasL* cDNA derived from C57BL/6 and C3H mice, but not with *mFasL* cDNA from BALB/c or DBA/2 mice. In addition, Kay-10 mAb efficiently blocks cytotoxic activity of a C3H T-cell line, but not a BALB/c T-cell line. Phenotypic and genotypic characterizations of mouse Fas Ligand reveal the existence of two alloantigens: mFasL.1, which is recognized by mAbs Kay-10, MFL3 (Cat. no. 555291), and MFL4 (Cat. no. 555022), and mFasL.2 (recognized by mAbs MFL3 and MFL4). Functional studies suggest that mFasL.2 has higher specific activity than mFasL.1. In the mouse, FasL is expressed on activated T cell lines and in spleen, testis, and eye. *FasL* mRNA has been demonstrated at various levels in bone marrow, thymus, spleen, lymph node, lung, small intestine, testis, and uterus. Moreover, T-cell activators, but not B-cell activators, enhanced the expression of *FasL* mRNA in splenocytes; and *FasL* mRNA was restricted to the T-cell lineage among a panel of cell lines from lymphoid tissues. Fas Ligand is not functional in mice homozygous for the *gld*(generalized lymphoproliferative disease) mutation; these mice cannot limit the expansion of activated lymphocytes and develop autoimmune disease. Fas Ligand is a member of the TNF/NGF family which binds to CD95 (Fas), inducing apoptotic cell death. This Fas/Fas Ligand interaction is believed to participate in T-cell development, the regulation of immune responses, and cell-mediated cytotoxic mechanisms. There is mounting evidence that Fas Ligand is also pro-inflammatory, mediating neutrophil extravasation and chemotaxis. Fas Ligand is released from the surface of transfectant cells by metalloproteinases, and the soluble Fas Ligand may block the activities of the membrane-bound molecule.

Preparation and Storage

The antibody was conjugated with biotin under optimum conditions, and unreacted biotin was removed.
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
Immunohistochemistry-formalin (antigen retrieval required)	Reported

Recommended Assay Procedure:

We have found that enriched splenic T cells are induced to express Fas Ligand by 6-8-hour culture with plate-bound anti-mouse CD3 antibody mAb 17A2 (Cat. no. 555273), 145-2C11 (Cat. no. 557306/553058), or 500A2 (Cat. no. 553238). Because Fas Ligand is expressed at low density on activated cells, we recommend the use of a "bright" second-step reagent, such as Streptavidin-PE (Cat. no. 554061). Other reported applications include immunohistochemical staining of formalin-fixed paraffin-embedded sections.

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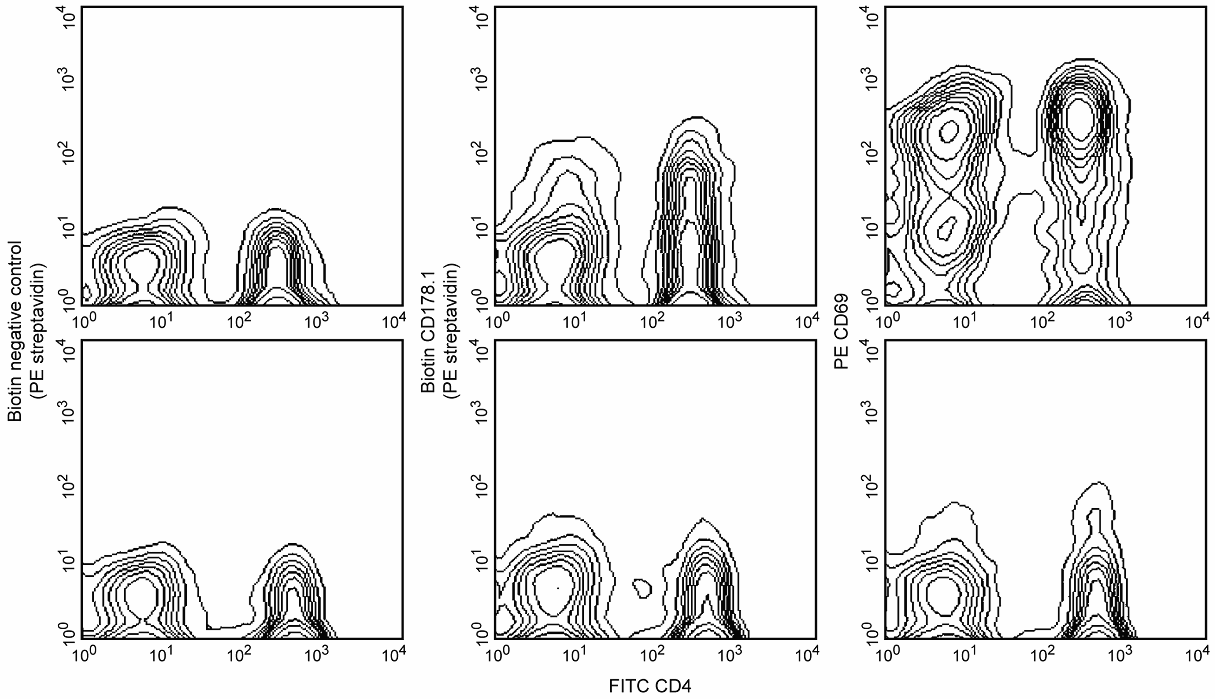

Expression of Fas Ligand on activated T lymphocytes. *T lymphocytes from C57BL/6 spleen (mouse T Cell Enrichment Column, R&D Systems, Minneapolis, MN), cultured for 7 hours in the presence of plate-bound anti-mouse CD3e mAb 500A2 (Cat. no. 553238, upper panels) or on uncoated plates (lower panels were simultaneously stained with FITC-conjugated anti-mouse CD4 mAb RM4-5 (Cat. no. 553046/553047) and biotin-conjugated mAb Kay-10 (center panels) or PE-conjugated anti-mouse CD69 mAb H1.2F3 (to demonstrate activation, Cat. no. 553237, right panels), followed by Streptavidin-PE (Cat. no. 554061, left and center panels). Flow cytometry was performed on a BD FACScan™ flow cytometry system.*

Suggested Companion Products

Catalog Number	Name	Size	Clone
555273	Purified Rat Anti-Mouse CD3 Molecular Complex	0.5 mg	17A2
557306	Purified Hamster Anti-Mouse CD3e	0.1 mg	145-2C11
553238	Purified Hamster Anti-Mouse CD3e	0.5 mg	500A2
554061	PE Streptavidin	0.5 mg	(none)
559531	Biotin Mouse IgG2b, κ Isotype Control	0.25 mg	MPC-11

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 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.

References

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