Technical Data Sheet

Purified Hamster anti-rat/mouse CD49a

Product Information

Material Number:	**555001**
Alternate Name:	Integrin α1 chain
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	Ha31/8
Immunogen:	Rat Emulsified Lewis Rat Glomeruli Cells
Isotype:	Armenian Hamster IgG2, λ1
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The Ha31/8 antibody reacts with the 180-kDa integrin α1 chain (CD49a), which is a transmembrane glycoprotein that non-covalently associates with the integrin β1 subunit (CD29) to form the α1β1 (complex known as VLA-1). VLA-1 has been reported to be expressed on activated T cells, monocytes, smooth muscle cells, and endothelial cells. It is a receptor for collagen and laminin. The Ha31/8 monoclonal antibody is specific for both rat1 and mouse CD49a. It has been reported that Ha31/8 antibody can block VLA-1-mediated binding of rat cells to collagen.

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
Immunohistochemistry-frozen	Tested During Development
Immunoprecipitation	Tested During Development
Immunohistochemistry-frozen	Tested During Development
Blocking	Reported
Immunohistochemistry-formalin (antigen retrieval required)	Not Recommended
Western blot	Not Recommended

Recommended Assay Procedure:
Preliminary studies have shown that azide-containing antibody preparations may non-specifically interfere with some *in vitro* adhesion assays; therefore, we recommend the No Azide/Low Endotoxin (NA/LE™) format of the Ha31/8 antibody (Cat. No. 555000) and NA/LE™ hamster IgG isotype control (Cat. No. 553961) for *in vitro* blocking studies.

Suggested Companion Products

Catalog Number	Name	Size	Clone
553962	Purified Hamster IgG2, λ1 Isotype Control	0.5 mg	Ha4/8
554011	FITC Mouse Anti-Armenian and Syrian Hamster IgG Cocktail	0.5 mg	(none)

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. Although hamster immunoglobulin isotypes have not been well defined, BD Biosciences Pharmingen has grouped Armenian and Syrian hamster IgG monoclonal antibodies according to their reactivity with a panel of mouse anti-hamster IgG mAbs. A table of the hamster IgG groups, Reactivity of Mouse Anti-Hamster Ig mAbs, may be viewed at http://www.bdbiosciences.com/pharmingen/hamster_chart_11x17.pdf.

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4. 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.
5. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.

References

Hemler ME. VLA proteins in the integrin family: structures, functions, and their role on leukocytes. *Annu Rev Immunol.* 1990; 8:365-400.(Biology)

Mendrick DL, Kelly DM, duMont SS, Sandstrom DJ. Glomerular epithelial and mesangial cells differentially modulate the binding specificities of VLA-1 and VLA-2. *Lab Invest.* 1995; 72(3):367-375.(Immunogen: Blocking)

Miyake S, Sakurai T, Okumura K, Yagita H. Identification of collagen and laminin receptor integrins on murine T lymphocytes. *Eur J Immunol.* 1994; 24(9):2000-2005.(Biology)