

Technical Data Sheet

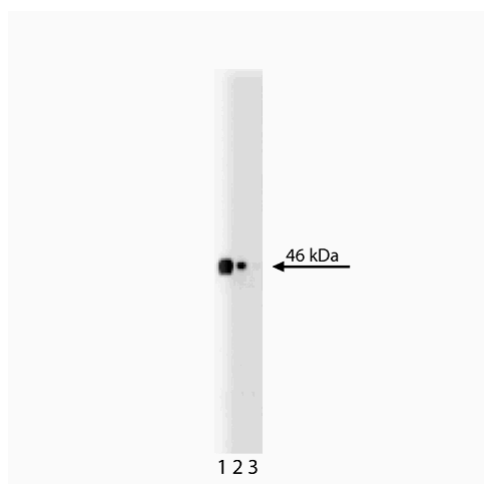
Purified Mouse Anti-Human CD38

Product Information

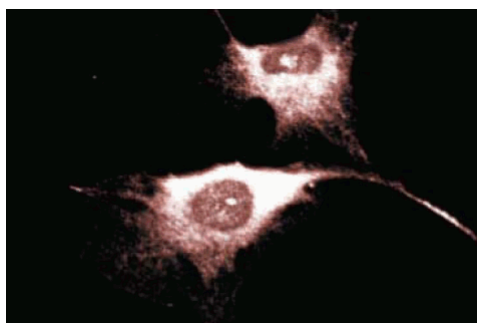
Material Number:	611114
Size:	50 µg
Concentration:	250 µg/ml
Clone:	22/CD38
Immunogen:	Human CD38 aa. 171-292
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	46 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Lymphocyte trafficking is essential for efficient immune responses in that it allows antigen sensitive lymphocytes to encounter antigen and be recruited to sites of infection. Trafficking involves the passage of lymphocytes across the HEV, a process that is mediated by selectins. CD38 is a single-chain type II transmembrane glycoprotein that is expressed by a variety of immature and activated lymphocytes. It mediates a selectin-like binding to endothelial cells, thus functioning as an adhesion molecule. Human and mouse forms of the protein are highly similar and homologous to the *Aplysia californica* ADP-ribosyl-cyclase. CD38 catalyzes the synthesis of cyclic ADP-ribose (cADPR), a putative endogenous regulator of calcium release. This is thought to be key to CD38-mediated signal transduction. A possible ligand for CD38 is the Ig superfamily protein CD31. In addition, activation of CD38 with a monoclonal antibody induces leukemic cell proliferation. Thus, CD38 is a cell surface protein that is important for lymphocyte migration and may be involved in the propagation of leukemic cells in AML (acute myelogenous leukemia).



Western blot analysis of CD38 on EB1 lysate. Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of CD38.



Immunofluorescence staining of Human Endothelial cells.

Preparation and Storage

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

Store undiluted at -20°C.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal
611546	EB1 Cell Lysate	500 µg	(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. 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

Deaglio S, Morra M, Mallone R, et al. Human CD38 (ADP-ribosyl cyclase) is a counter-receptor of CD31, an Ig superfamily member. *J Immunol.* 1998; 160(1):395-402.(Biology)

Jackson DG, Bell JL. Isolation of a cDNA encoding the human CD38 (T10) molecule, a cell surface glycoprotein with an unusual discontinuous pattern of expression during lymphocyte differentiation. *J Immunol.* 1990; 144(7):2811-2815.(Biology)

Konopleva M, Estrov Z, Zhao S, Andreeff M, Mehta K. Ligation of cell surface CD38 protein with agonistic monoclonal antibody induces a cell growth signal in myeloid leukemia cells. *J Immunol.* 1998; 161(9):4702-4708.(Biology)