Technical Data Sheet

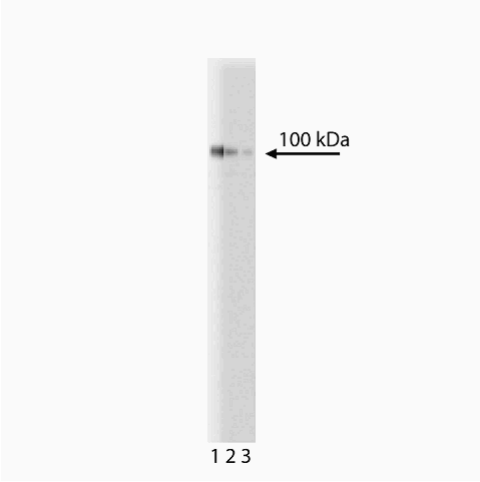
Purified Mouse Anti-Human CD54

Product Information

Material Number:	**611705**
Alternate Name:	ICAM-1
Size:	150 µg
Concentration:	250 µg/ml
Clone:	28/CD54
Immunogen:	Human CD54/ICAM-1 aa. 46-160
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	90-115 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

The migration of T cells through lymph nodes and their interactions with antigen presenting cells (APCs) involve adhesion molecules on the surfaces of the T cell and the cell with which it interacts. These molecules include the selectins, the integrins, members of the immunoglobulin superfamily, and some mucin-like proteins. The integrins mediate adhesion between cells and between cells and the extracellular matrix. LFA-1 (lymphocyte function-associated antigen 1), a member of the ß2 integrin family, is expressed on T cells, neutrophils, and macrophages and is thought to be the most important adhesion molecule for lymphocyte activation. It interacts with members of the immunoglobulin superfamily, the **i**nter**c**ellular **a**dhesion **m**olecules: ICAM-1, -2, and -3. ICAM-1 and ICAM-2 are expressed on endodthelium and APCs, while ICAM-3 is expressed only on leukocytes. ICAM-1 is most homologous to neural cell adhesion molecule and myelin-associated glycoprotein. It is a 55 kDa glycoprotein that is heavily glycosylated to form 90 kDa to 115 kDa proteins. Its interactions with LFA-1 are necessary for CTL and NK mediated killing, T and B cell responses, and immune cell extravasation.



Western blot analysis of CD54 on HCT-8 lysate. *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of CD54.*

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
Fluorescence microscopy	Not Recommended

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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

Staunton DE, Marlin SD, Stratowa C, Dustin ML, Springer TA. Primary structure of ICAM-1 demonstrates interaction between members of the immunoglobulin and integrin supergene families. *Cell.* 1988; 52(6):925-933.(Biology)

Wang Q, Doerschuk CM. Neutrophil-induced changes in the biomechanical properties of endothelial cells: roles of ICAM-1 and reactive oxygen species. *J Immunol.* 2000; 164(12):6487-6494.(Biology)