Technical Data Sheet

Purified Mouse Anti-CD51

Product Information

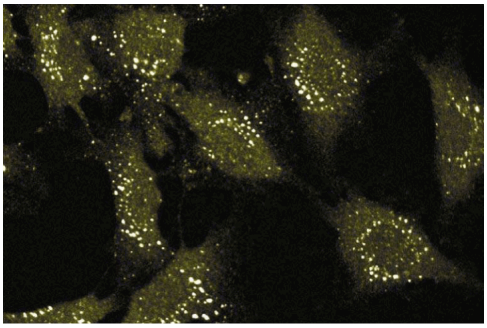
Material Number:	**611012**
Alternate Name:	Integrin αV; Vitronectin Receptor α; VNRα
Size:	50 µg
Concentration:	250 µg/ml
Clone:	21/CD51
Immunogen:	Human CD51/VNRα aa. 609-722
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Rat Tested in Development: Human, Dog, Mouse
Target MW:	125 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Integrins are a family of proteins that mediate intercellular adhesion or adherence to extracellular matrix proteins. Their roles are essential for embryonic development, tumor metastasis, organ function, and proper immune cell function. Family members are heterodimers that contain a larger α subunit that is unique to each individual receptor and a smaller β subunit that can be shared by several receptors. Based on β subunit content, integrins are divided into the subfamilies β1, β2, and β3. The β3 subfamily contains the vitronectin receptor (αVβ3) and the platelet protein gpIIb/IIIa. The α chain of the vitronectin receptor (VNRα, CD51, integrin αV) has been reported to consist of a disulfide-linked large extracellular (125 kDa) subunit and a smaller (25 kDa) membrane-anchored subunit. The large subunit contains multiple sequences with homology to calcium-binding sites in other proteins and an RGD-dependent ligand-binding site, while the small subunit contains a transmembrane domain and a short cytoplasmic domain. VNRα has been reported to be noncovalently associated with the VNR β3-chain (CD61, gpIIIa). The VNR mediates cell adhesion to RGD-containing ligands such as vitronectin, von Willebrand factor, fibrinogen, and thrombospondin.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

Western blot analysis of CD51 (Integrin αV) on a rat cerebrum lysate. *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the anti-CD51 antibody.*



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.

BD Biosciences
bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit bdbiosciences.com/how_to_order/

BD Biosciences

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

Catalog Number	Name	Size	Clone
611463	Rat Cerebrum Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Igs	0.5 mg	Polyclonal

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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
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.

References

Bodary SC, McLean JW. The integrin beta 1 subunit associates with the vitronectin receptor alpha v subunit to form a novel vitronectin receptor in a human embryonic kidney cell line. *J Biol Chem.* 1990; 265(11):5938-5941.(Biology)

Suzuki S, Argraves WS, Arai H. Amino acid sequence of the vitronectin receptor alpha subunit and comparative expression of adhesion receptor mRNAs. *J Biol Chem.* 1987; 262(29):14080-14085.(Biology)

Suzuki S, Argraves WS, Pytela R. cDNA and amino acid sequences of the cell adhesion protein receptor recognizing vitronectin reveal a transmembrane domain and homologies with other adhesion protein receptors. *Proc Natl Acad Sci U S A.* 1986; 83(22):8614-8618.(Biology)