

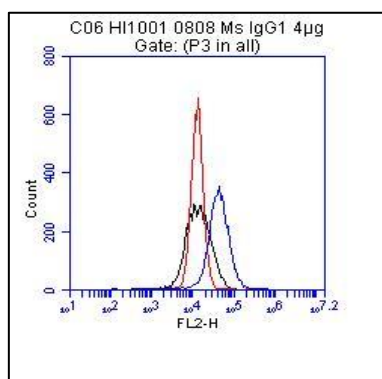
## CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

<b>Product name</b>	Alpha-V/Beta-3 Integrin,, Human, clone BV3		
<b>Catalog number</b>	HM2034-100UG		
<b>Lot number</b>	-	<b>Expiry date</b>	-
<b>Volume</b>	1 ml	<b>Amount</b>	100 µg
<b>Formulation</b>	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	<b>Concentration</b>	100 µg/ml
<b>Host Species</b>	Mouse IgG1	<b>Conjugate</b>	None
<b>Endotoxin</b>	N.A.	<b>Purification</b>	Protein G
<b>Storage</b>	4°C		

### Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #		1	3	2				
Yes		•	•	•		•	•	
No								•
N.D.	•				•			

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot



FC: HUVEC cells were incubated with 2µg/ml HM2034 for 1h at 4°C. Black: isotype control mouse IgG<sub>1</sub>, Red: cells only, Blue: HM2034, clone BV3.

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- FC: Antibody BV3 stains the extracellular domain of integrin  $\alpha\beta 3$ . The cells were fixed in 4% paraformaldehyde before before analysis. Negative control the primary antibody was omitted. (Ref.2)
- IHC: Tissue sections fixed in Histochoice and blocked with 5% BSA. (Ref.1).
- Positive control: HUVEC cells.

### General Information

#### Description

The monoclonal antibody BV3 recognizes human alpha-V/beta-3 integrin present on human cells. Integrins are a superfamily of  $\alpha\beta$  heterodimeric cell-surface adhesion receptors found in many species. They are expressed on a variety of cells and mediate numerous physiological processes, including inflammation, migration, adhesion and proliferation. The  $\beta 3$  family consist of 2 members:  $\alpha 1\beta 3$  and  $\alpha v\beta 3$ , which mediate cell-cell and cell-ECM interactions and are important for cellular migration, regulation of gene expression, cell survival, adhesion and differentiation. All processes which are involved in tissue development, angiogenesis and thrombosis. Each subunit consist of an extracellular domain, a single transmembrane segment and a cytoplasmic tail. They connect to the actin cytoskeleton via adaptor proteins that bind theircytoplasmic tails. Cell matrix adhesions also act as signaling units by their capacity to organize the actin cytoskeleton and to accumulate various signaling intermediates. Integrin  $\alpha v\beta 3$  was originally identified as the vitronectin receptor. Nevertheless, other ligands include fibrinogen, fibronectin, laminin, thrombospondin, Von Willebrand factor, tenascin, osteopontin and several forms of collagen. The interactions of integrin  $\alpha v\beta 3$  to those ligands is mediated by the RGD (Arg-Gly-Asp) sequence motif present in these proteins.

Deregulation of  $\beta 3$  integrins is involved in e.g. autoimmune diseases, cardiovascular disorders, transplant rejection and tumorigenesis. In contribution to the latter, integrin  $\alpha \beta 3$  contribute by supporting growth of small (tumor) blood vessels thereby potentiating the metastatic potential. Overexpression of integrin  $\alpha \beta 3$  has been demonstrated in various tumors and activated endothelium.

**Aliases** Vitronectin receptor, integrin  $\alpha \beta 3$ , cd51/cd61

**References**

1. Newton, S et al.; Electroconvulsive seizure increases adult hippocampal angiogenesis in rats. *Eur J neurosc.* 2006, *24*:819-828
2. Merkel, O et al.; Integrin  $\alpha \beta 3$  targeted gene delivery using RGD peptidomimetic conjugates with copolymers of PEGylated poly(ethyleneimine). *Bioconj chem.* 2009, *20*:1270-1280
3. Dare, E et al.; Fibrin sealants from fresh/frozen plasma as scaffolds for in vitro articular cartilage regeneration. *Tissue engineering*, 2009, *15*:2285

**Storage&stability** Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

**Precautions** For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

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We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC  
Brenda Teunissen

Date  
29/11/2019

Do you have any questions or comments regarding this product? Please contact us via [support@hycultbiotech.com](mailto:support@hycultbiotech.com).