

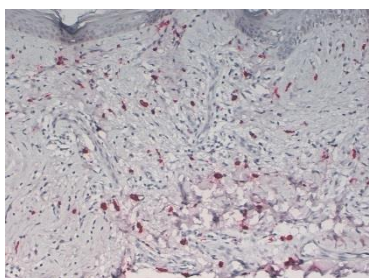
**CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET**

<b>Product name</b>	Beta-3 integrin subunit, Human, clone BV4		
<b>Catalog number</b>	HM2035-20UG		
<b>Lot number</b>	-	<b>Expiry date</b>	-
<b>Volume</b>	200 µl	<b>Amount</b>	20 µg
<b>Formulation</b>	0.2 µm filtered in PBS+0.1%BSA	<b>Concentration</b>	100 µg/ml
<b>Host Species</b>	Mouse IgG1	<b>Conjugate</b>	None
<b>Endotoxin</b>	<24 EU/mg	<b>Purification</b>	Protein G
<b>Storage</b>	4°C		

**Application notes**

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	2	3			1		1	4
Yes	•	•			•	•	•	•
No								
N.D.			•	•				

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



IHC-P: Immunohistochemical analysis of Human CD61 in paraffin-embedded human melanoma tissue using mAb BV4.

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.

- IHC-F: Tissue sections were fixed in acetone. As negative control an irrelevant mouse IgG was used (Ref.2).
- FS: Antibody clone BV4 inhibits the downstream activation, reducing the mitogenic effects of two of its ligands, VEGFR-2 and HIV-1-Tat. (Ref.1).
- IP: clone BV4 precipitates beta3 integrin complexes from endothelial cell lysate.
- IHC-P: Tissue sections were deparaffinized in xylene and pretreated with 10mmol/l sodium citrate buffer, pH 6.0
- Positive control: *Endometrium*.

**General Information**
**Description**

The monoclonal antibody BV4 recognizes human beta3 integrin subunit present in Platelet glycoprotein GPIIb-IIIa (integrin alphaIIb/beta3, CD41/CD61) and in the vitronectin receptor (integrin alphaV/beta3, CD51/CD61). Integrins are a family of heterodimeric membrane glycoproteins expressed on diverse cell types which function as the major receptors for extracellular matrix and as cell-cell adhesion molecules. As adhesion molecules they play an important role in numerous biological processes such as platelet aggregation, inflammation, immune function, wound healing, tumour metastasis and tissue migration during embryogenesis. In addition integrins are involved in signaling pathways, transmitting signals both into and out from cells. All integrins consist of two non-covalently associated subunits, alpha and beta. At least 12 different alpha subunits and 8 beta subunits have been identified. The beta subunits all contain 56 conserved cysteines (except beta4 which has 48) which are arranged in four repeating units. The beta3 subunit is a 93kDa protein that contains a large loop in the N-terminus stabilized by intrachain disulphide bonding with the first cysteine-rich repeat. Platelet glycoprotein GPIIb-IIIa is expressed on platelets and megakaryoblasts. It is constitutively expressed and becomes activated on triggered platelets. Platelet glycoprotein GPIIb-IIIa binds to fibrinogen, fibronectin, vWF, vitronectin and thrombospondin. Next to this it is also a receptor for several soluble adhesive proteins. Vitronectin receptor is expressed on endothelial cells, some B cells, monocytes/macrophages, platelets and

tumour cells. Vitronectin receptor binds next to vitronectin to fibrinogen, vWF, thrombospondin, fibronectin, osteopontin and collagen. Defects in human beta3 integrin are a cause of Glanzmann thrombasthenia, which is an autosomal recessive disorder characterized by mucocutaneous bleeding and the inability of this integrin to recognize macromolecular or synthetic peptide ligands.

**Aliases** Platelet membrane glycoprotein IIIa, GPIIIa, CD61

**Cross reactivity** Bovine: Yes (Ref.2)

**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  $\alpha\beta3$  targeted gene delivery using RGD peptidomimetic conjugates with copolymers of PRGylated 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  
16/11/2020

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