

**CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET**

<b>Product name</b>	Ephrin B4, Mouse, clone VEB4-7E4		
<b>Catalog number</b>	HM1099-100UG		
<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>	Rat IgG2a	<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 #								
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*

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.

**General Information**

<b>Description</b>	The monoclonal antibody VEB4-7E4 recognizes mouse Ephrin type-B receptor 4 (EphB4), an ~110 kD protein. Erythropoietin-producing human hepatocellular carcinoma (Eph) receptors and ephrins are membrane proteins. They are classified into 2 broad subclasses, namely A and B, according to structural homologies and binding specificities. Eph receptors are tyrosine kinases, which autophosphorylate upon binding to their cognate ephrin ligands. Eph receptors and ephrins are frequently expressed in reciprocal patterns that correlate with cellular boundaries during embryonic development. The interaction between EphB4 and its ligand, Ephrin-B2, plays an important role in cell-cell, cell-extracellular matrix interactions as well as in cell migration, adhesion and proliferation. During the early stages of vascular development, EphB4 is specifically expressed in venous endothelium, whereas Ephrin-B2 is expressed in arterial endothelium. In mouse embryo's, EphB4 and Ephrin-B2 are essential for embryonic heart development and angiogenesis. In adult microcirculation, EphB4 is not a ubiquitous marker of arterial/venous polarity, but is expressed along both venules and arterioles. Furthermore, EphB4 is upregulated by endothelial cells along blind-ended capillary sprouts versus connecting capillaries. As such, EphB4 is thought to play a role in the patterning of new vessels during angiogenesis. EphB4 is also expressed in a variety of tumor cells, like gastrointestinal, prostate, bladder, breast, liver, lung and ovarian cancers, as well as leukemia, mesothelioma, malignant breast tumors and melanoma. Reduction of EphB4 activity accelerated tumorigenesis in colon and rectum. In head and neck squamous cell carcinoma and endometrial carcinoma, overexpression of EphB4 is inversely related to a poor prognosis. However, in mesothelioma, up-regulation of EphB4 resulted in growth of the tumor. Besides the essential expression of EphB4, coexpression of other EphB4 family members or EphB-ligands may affect tumor cell viability and proliferation as well. The monoclonal antibody VEB4-7E4 marks venous endothelial cells, but not arterial endothelial cells in B16 melanoma cells.
<b>Aliases</b>	Tyrosine-protein kinase receptor HTK
<b>References</b>	1. Huang, X et al; EphB4 overexpression in B16 melanoma cells affects arterial-venous patterning in tumor angiogenesis. <i>Cancer Res</i> 2007, <i>67</i> : 9800
<b>Storage&amp;stability</b>	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  
12/11/2019

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