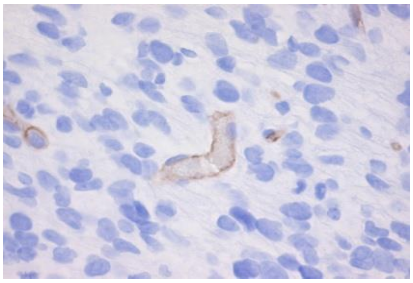
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	CD34, Mouse, clone MEC14.7		
Catalog number	HM1015-100UG		
Lot number	-	**Expiry date**	-
Volume	1 ml	**Amount**	100 µg
Formulation	0.2 µm filtered in PBS+0.02%NaN3+0.1%BSA	**Concentration**	100 µg/ml
Host Species	Rat IgG2a	**Conjugate**	None
Endotoxin	N.A.	**Purification**	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	1	3,4,6	1	1,2,5			1	1
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



CD34 in mouse glioma. Staining of paraffin tissue section with antibody MEC14.7 (Cat. # HM1015). Anti-mouse CD34 at 5 µg/ml (o/n, 4°C) resulted in the specific staining of endothelial cells.

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: mice blood cells; 0.1 µg MEC14.7/106 cells (Ref. 5)
- W: both reduced/non-reduced; 70-105 kDa, depending on glycosylation state and cell type (Ref. 1)
- P: Formalin fixed; boiled twice for 5 minutes in citrate (pH 6.0) as antigen retrieval (in house tested; Ref 4,6) or 0.03 % trypsin treatment for 10 minutes at 37 °C (Ref. 3).
- IP: ~100 kDa protein in H5V cells (Ref.1).
- Positive control: H5V cells; negative control: Muscle cells

General Information

Description

The monoclonal antibody MEC14.7 recognizes mouse CD34, a single-pass type I membrane glycophosphoprotein present on small vessel endothelial cells and hematopoietic progenitor cells. The apparent molecular mass of CD34 is heterogeneous, depending on the glycosylation state in different cell types. In cultured endothelioma cell lysate, CD34 has a molecular weight of ~100 kDa, whereas in lung lysates it is ~80 kDa. 2 Isoforms of CD34 exist, both are expressed on the cell surface.CD34 is an adhesion molecule performing a role in early hematopoiesis by mediating the attachment of stem cells to the bone marrow extracellular matrix or directly to stromal cells. CD34 acts as a scaffold for the attachment of lineage specific glycans, allowing stem cells to bind to lectins expressed by stromal cells or other marrow components. CD34 presents carbohydrate ligands to selectins.CD34 is widely used as a marker to select early hematopoietic stem and progenitor cells in experimental and clinical hematopoiesis.
The monoclonal antibody MEC14.7 recognizes a neuraminidase sensitive epitope on endothelium in vivo, particularly on small vessels and neoformed capillaries and developing vascular structures in embryonal structures.
The monoclonal antibody MEC14.7 can be used for identification and characterization of capillary endothelial cells. Furthermore, the antibody is useful for isolation and characterization of hematopoietic progenitor cells, particularly of

myelomonocytic colony forming cells. Monoclonal antibody MEC14.7 is also useful for immunopurification and cell separation.

Immunogen Murine transformed EC t-end.1

Aliases Hematopoietic progenitor cell antigen CD34

References

1. Garlanda, C et al; Characterization of MEC 14.7, a new monoclonal antibody recognizing mouse CD34, a useful reagent for identifying and characterizing blood vessels and hematopoietic precursors. Eur J Cell Biol 1997, *73*: 368
2. Dong, Q et al; A general strategy for isolation of endothelial cells from murine tissues: Characterization of two endothelial cell lines from the murine lung and subcutaneous sponge implants. Arterioscler Thromb Vasc Biol 1997, *17*: 1599
3. Solberg, H et al; A functional overlap of plasminogen and MMPs regulates vascularization during placental development. Development 2003, *130*: 4439
4. Almholt, K et al; Metastasis of transgenic breast cancer in plasminogen activator inhibitor-1 gene-deficient mice. Oncogene 2003, *22*: 4389
5. Sho, E et al; Hemodynamic regulation of CD34+ cell localization and differentiation in experimental aneurysms. Arterioscler Thromb Vasc Biol 2004, *24*: 1916
6. Suganuma, T et al; Functional expression of the angiotensin II type 1 receptor in human ovarian carcinoma cells and its blockade therapy resulting in suppression of tumor invasion, angiogenesis, and peritoneal dissemination. Clin Cancer Res 2005, *11*: 2686

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.

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	Date
Brenda Teunissen	11/11/2019

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