

PN IM1185 – 6 mL – Liquid – Ready-to-use – Clone QBEnd10

For Research Use Only. Not for use in diagnostic procedures.

SPECIFICITY

The CD34 antigen is a monomeric transmembrane phosphoglycoprotein of about 110 kDa with two distinct extracellular domains. The membrane proximal domain, of about 110 amino acids, probably adopts a globular conformation. The NH₂-terminal domain, of about 140 amino acids, is heavily glycosylated with both N-linked glycans and sialylated O-linked carbohydrates and probably exhibits an extended rod-like structure typical of mucin-like glycoproteins. The CD34 antigen is expressed on hematopoietic progenitor cells of all lineages as well as the most pluripotential stem cells. CD34 antigen expression is highest on the most primitive stem cells and is gradually lost as lineage committed progenitors differentiate.

The CD34 antigen is also present on capillary endothelial cells and on bone marrow stromal cells. Variations of glycosylation are thought to occur during normal hematopoiesis depending of lineage commitment and the level of cellular maturation.

QBEnd10 monoclonal antibody (mAb) recognizes a Pasteurella glycoprotease-sensitive class II epitope.

QBEnd10 reacts with early normal hematopoietic progenitor cells, and with vascular endothelial cells.

The QBEnd10 mAb has been assigned to the CD34 cluster of differentiation at the fourth International Workshop on Human Leucocyte Differentiation Antigens held in Vienna, Austria, in 1989 (1-5).

REAGENT

IOPath® CD34 Monoclonal Antibody
PN IM1185 – 6 mL – Liquid – Ready-to-use

Clone	QBEnd10
Isotype	IgG1, Mouse
Immunogen	Human endothelial cells (HUVEC)
Hybridoma Source	N/A
Purification	Ascites fluid or affinity chromatography

REAGENT CONTENTS

This antibody is provided 50 mM Tris-HCl, 150 mM NaCl, pH 7.2 with 1 mg/mL bovine serum albumin and 0.1 % sodium azide. The buffer contains a green dye.

APPLICATION

This product is for use on cytological samples and frozen sections or routinely fixed (formalin, Bouin's, B5), paraffin-embedded tissue sections).

STATEMENTS OF WARNING

1. This reagent contains 0.1% sodium azide. Sodium azide under acid conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, wash excessively with water.
2. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
3. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
4. Do not use antibody beyond the expiration date on the label.
5. Do not expose reagents to strong light during storage or incubation.
6. Avoid microbial contamination of reagents or incorrect results might occur.
7. Use good laboratory practices when handling this reagent.

STORAGE CONDITIONS AND STABILITY

This reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze.

REAGENT PREPARATION

No reconstitution is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 18 – 25°C prior to use.

PROCEDURE

The pre-diluted form should be used without dilution.

SELECTED RESEARCH REFERENCES

1. Civin, C.L., Trischmann, T.M., Fackler, M.J., Bernstein, I.D., Buhning, H-J., Campos, L., Greaves, M.F., Kamoun, M., Katz, D.R., Lansdorp, P.M., Look, A.T., Seed, B., Sutherland, D.R., Tindle, R.W., Uchanska-Ziegler, B., "Summary of CD34 cluster workshop section", 1989, Leucocyte Typing IV, Knapp, W., et al., Eds., Oxford University Press, 818-825.
2. Fina, L., Molgaard, H.V., Robertson, D. *et al.* (1990) « Expression of the CD34 gene in vascular endothelial cells. » *Blood* **75**, 2417-2426.
3. Barrande, C, Traore, Y., Szekeres, G. and Hirn, J. (1993) « Isolation and characterization of two new monoclonal antibodies against the CD34 molecule ». *Hybridoma*, 1993, **12** (2), 203-213.
4. Leong, A.S.Y., Applied Immunohistochemistry for the surgical pathologist, 1993, Edward Arnold.
5. Van de Rijn, M. and Rouse, R.V. (1994) « CD34, A review » *Appl. Immunohistochem.* **2** (2): 71-80.

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