

# Monoclonal Antibody CD34

PN IM0786 – Purified – Freeze-dried – 0.2 mg – 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 NH<sub>2</sub>-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).

## REAGENT

Monoclonal Antibody CD34  
PN IM0786 – Purified – Freeze-dried –  
0.2 mg

**Clone** QBEnd10  
**Isotype** IgG1, mouse  
**Immunogen** Endothelial cell (HUVEC)

**Hybridoma Source** NSO x NZB spleen cells  
**Purification** Ascites fluid  
**Purification** Ion exchange or affinity chromatography  
**Buffer** 1 mg/mL bovine serum albumin in phosphate-buffered saline

## APPLICATION

Studies of CD34 positive cells by flow cytometry.

## STATEMENT OF WARNINGS

1. 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.
2. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
3. Do not use antibody beyond the expiration date on the label.
4. Avoid microbial contamination of reagents or incorrect results might occur.
5. Use good laboratory practices when handling this reagent.

## STORAGE CONDITIONS AND STABILITY

This freeze-dried form may be stored at 2 – 8°C until the expiration date stated on the vial label.

No preservative has been added.

## REAGENT PREPARATION

Depending of usage, reconstitute with 1 mL of distilled water, with or without 0.1% sodium azide (w/v).

The reconstituted form including 0.1% sodium azide may be stored for up to one month at 2 – 8°C.

The reconstituted form without sodium azide can be stored at –20°C or less, until the expiration date stated on the vial label.

In this case, aliquotting is recommended to avoid multiple freezing / thawing cycles.

## PROCEDURE

For each application, it is recommended to establish the right range of antibody dilutions to be used for the experiment.

## 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.

## PRODUCT AVAILABILITY

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For additional information in the USA, call 800-526-7694.

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Immunotech, a Beckman Coulter Company  
130, avenue de Lattre de Tassigny, B.P. 177  
13276 Marseille Cedex 9, France

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