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Product Information

Monoclonal Anti-CD164
Clone 67D2
produced in mouse, purified immunoglobulin

Catalog Number **C9618**

Product Description

Monoclonal Anti-CD164 (mouse IgG1 isotype) is derived from the hybridoma 67D2 produced by the fusion of mouse myeloma cells (SP2/0) and splenocytes from BALB/c mice immunized with breast tumor cell line T-47D (Gene ID: 8763).[1] The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-CD164 recognizes human CD164 (80-90 kDa).[1] The antibody may be used in various immunochemical techniques including immunobloting,[2] FACS,[1, 2] immunoprecipitation, immunocytochemistry,[2] and immunohistochemistry.[3]

CD164 (also known as Endolyn and MGC-24) is a sialomucin highly expressed by primitive hematopoietic progenitor cells. The CD164 receptor is implicated in mediating or regulating hematopoietic precursor cell adhesion to stroma and may serve as a potent negative regulator of hematopoietic progenitor cell proliferation.[4] The gene encoding human CD164 contains six exons that through alternative splicing can be expressed as three distinct isoforms: a full length with six exons, an isoform that does not contain exon 5 and another isoform in which exon 4 is deleted.[1-3] The translated protein is a sialomucin localized in endocytotic compartments and is important for endolysosomal biogenesis and trafficking. The protein has a conserved structure in many species, in particular the O-linked glycosylation of the extracellular domain and the high degree of amino acid similarities within the transmembrane and cytoplasmic domains.[1-3] CD164 protein is expressed by subpopulations of CD34+ haematopoietic stem, and progenitor cells. These include the majority of clonogenic myeloid (colony-forming unit-granulocyte-macrophage [CFU-GM]) and erythroid (blast-forming unit-granulocyte-erythroid [BFU-E]) progenitors and the hierarchically more primitive precursors (pre-CFU).[5]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~2 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For extended storage, freeze at –20 °C in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Flow cytometry: a working concentration of 2-4 µg per test is recommended using human blood.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Watt, S.M., et al., *Blood*, **92**, 849-866 (1998).
2. Doyonnas, R., et al., *J. Immunol.*, **165**, 840-851 (2000).
3. Watt, S.M., et al., *Blood*, **95**, 3113-3124 (2000).
4. Watt, S.M., and Chan, J.W., *Leuk. Lymphoma*, **37**, 1-25 (2000).
5. Zannettino, A.C.W., et al., *Blood*, **92**, 2613-2628 (1998).

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