BEZ VL

CD 99
1:75

DakoCytomation

CE

Monoclonal
Mouse Anti-Human
CD99, MIC2 Gene Product
Ewing's Sarcoma Marker
Clone: 12E7[1]
Synonyms: $p30/32^{mic2}$, CD99
Immunogen: Acute lymphocytic leukemia T-cells[1]
Isotype: IgG_1, kappa

Code M3601
Mouse IgG concentration mg/L: See label on vial.

Intended use

For In Vitro diagnostic use.

Refer to the "General Instructions for Immunohistochemical Staining" or the Detection System "Instructions" of IHC procedures for: (1) Principle of Procedure, (2) Materials Required, Not Supplied, (3) Storage, (4) Specimen Preparation, (5) Staining Procedure, (6) Quality Control, (7) Troubleshooting, (8) Interpretation of Staining, (9) General Limitations.

Summary and explanation

Introduction
The MIC2 gene is a pseudoautosomal gene located on the short arms of both the X and Y chromosomes. The gene products are glycoproteins of similar molecular weight designated p30 and p32.[4-6] The proteins encoded by the MIC2 gene are neuraminidase- and protease-sensitive. In red cells, the MIC2 gene is regulated by the X-linked XG gene, resulting in a quantitative polymorphism for levels of the MIC2 gene product.[7]

Specificity
MIC2, 12E7 recognizes the products of the MIC2 gene and has been shown to have similar or identical reactivity to monoclonal antibodies HBA-71 and RFB-1.[3,6]

Reagent provided

MIC2, 12E7 is a mouse monoclonal antibody supplied in liquid form as tissue culture supernatant (containing fetal bovine serum) dialyzed against 0.05 mol/L Tris-HCl, pH 7.2 and 0.015 mol/L sodium azide.

MIC2, 12E7 may be used at a dilution of 1:50 to 1:75 in the LSAB method determined on formalin-fixed, paraffin-embedded tissue. These are guidelines only; optimal dilutions should be determined by the individual laboratory.

Materials required, but not supplied

Refer to the "General Instructions for Immunohistochemical Staining" and/or the Detection System "Instructions."

Precautions

1. For professional users.
2. This product contains sodium azide (NaN_3), a chemical highly toxic in pure form. At product concentrations, though not classified as hazardous, build-ups of NaN_3 may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing.[10]
3. Minimize microbial contamination of reagents or increase in nonspecific staining may occur.
4. As with any product derived from biological sources, proper handling procedures should be used.
5. Safety data sheet available for professional users on request.

Storage

Store at 2–8°C.

Specimen preparation

Paraffin Sections
MIC2, 12E7 can be used on formalin-fixed, paraffin-embedded tissue sections. Pretreatment with proteolytic enzymes is not recommended as it may reduce the staining intensity.

Cryostat Sections and Cell Smears
MIC2, 12E7 can also be used to label cryostat sections or cell smears.

Staining procedure

Follow the recommended procedure for the detection system selected.

Staining interpretation

The cellular staining pattern for anti-MIC2 gene product is membranous.

Performance characteristics

Normal Cells

The MIC2 gene products are expressed on the cell membrane of some lymphocytes (bone marrow, lymph nodes and spleen), cortical thymocytes, granulosa cells of the ovary, most Langerhans' islet cells, CNS ependymal cells, Sertoli's cells of the testis and in a few cases, endothelial cells of single blood vessels.[6]

Tumor Cells

A study of 70 different tumors has shown that among neoplastic tissues, only glioblastoma and ependymoma of the CNS and certain islet cell tumors of the pancreas reacted positively.[6] Because the MIC2 gene products are most strongly expressed on the cell membrane of Ewing's Sarcoma (ES) and primitive peripheral neuroectodermal tumors (pPNET), demonstration of the gene products allows for the differentiation of these tumors from other round cell tumors of childhood and adolescence.[4,6-9]

References

1. Levy R, et al. A human thymus-leukemia antigen defined by hybridoma monoclonal antibodies. PNAS USA 1979; 76:6552
2. Herron R and Smith GA. Identification and immunochemical characterization of the human erythrocyte membrane glycoproteins that carry the Xg^a antigen. Biochem J 1989; 262:369
3. Latron F, et al. Immunochemical characterization of the human blood cell membrane glycoprotein recognized by the monoclonal antibodies 12E7. Biochem J 1987; 247:757
4. Fellinger EJ, et al. Biochemical and genetic characterization of the HBA71 Ewing's sarcoma cell surface antigen. Cancer Res 1991; 51:336
5. Goodfellow PN and Tippett P. A human quantitative polymorphism related to the Xg blood groups. Nature 1981; 289:404
6. Ambros IM, et al. MIC2 is a specific marker for Ewing's sarcoma and peripheral primitive neuroectodermal tumors. Cancer 1991; 67:1886
7. Fellinger EJ, et al. Immunohistochemical analysis of Ewing's Sarcoma cell surface antigen $p30/32^{mic2}$. Amer J Pathol 1991; 139:317
8. Rettig WJ, et al. Ewing's Sarcoma: new approaches to histogenesis and molecular plasticity. Lab Invest 1992; 66:133
9. Fellinger EJ, et al. Comparison of cell surface HBA71 ($p30/32^{mic2}$), neuron specific enolase, and vimentin in the immunohistochemical analysis of Ewing's Sarcoma of bone. Amer J Surg Pathol 1992; 16(8):746
10. Department of Health, Education and Welfare, National Institute for Occupational Safety and Health, Rockville, MD. "Procedures for the decontamination of plumbing systems containing copper and/or lead azides." DHHS (NIOSH) Publ. No. 78-127, Current 13. August 16, 1976

REF Catalog / Code Number	Temperature Limitations	IVD *In Vitro* Diagnostic Medical Device
Manufacturer	LOT Batch Code	Contains Sufficient for <N> Tests
Use By	Consult *Instructions for Use*	EC REP Authorized Representative in the European Community

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