

Product Data Sheet

anti-human Macrophage Inhibitory Cytokine-1 monoclonal antibody

Product information

Catalog Number:	GM-0906
Clone:	ME-6D10
Description:	purified monoclonal mouse antibody
Specificity:	anti-human Macrophage Inhibitory Cytokine-1 (MIC-1)
Isotype:	IgG1
Purification:	Protein G
Storage:	short term: 2°C - 8°C; long term: -20°C (avoid repeated freezing and thawing)
Concentration:	1 mg/ml
Buffer :	phosphate buffered saline, pH 7.2
Immunogen:	genetic immunisation with cDNA encoding aa30-194 (N-term) of MIC-1 proprotein
Selection:	based on recognition of the complete native protein expressed on transfected mammalian cells

Working dilutions

Flow cytometry: 1.2 µg/10⁶ cells
CELISA: 1:200 - 1:400

For each application a titration should be performed to determine the optimal concentration.

Specificity testing by flow cytometry

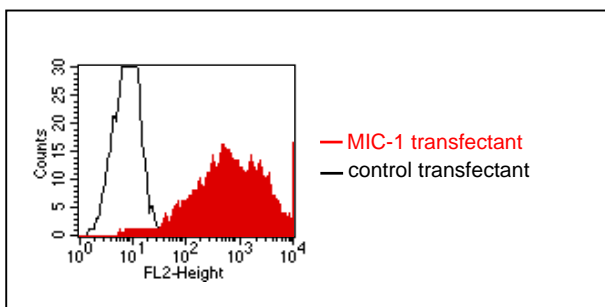


Fig.1: FACS analysis of BOSC23 cells using ME-6D10 Cat.# GM-0906. BOSC23 cells were transiently transfected with an expression vector encoding either MIC-1 (red curve) or an irrelevant protein (control transfectant: black curve). Binding of ME-6D10 was detected with a PE-conjugated secondary antibody. A positive signal was obtained only with MIC-1 transfected cells.

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Capillary gel electrophoresis (CGE) of ME-6D10

The antibody was purified by protein G affinity chromatography from cell culture supernatants and verified by capillary gel electrophoresis.

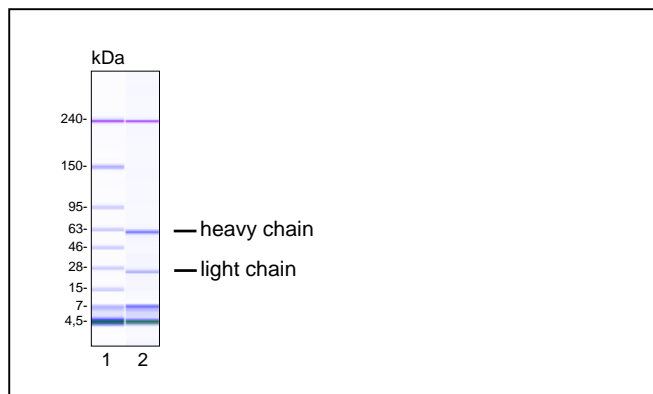


Fig.2: Capillary gel electrophoresis of purified ME-1C4 monoclonal antibody. Lane 1: molecular weight marker, Lane 2: purified ME-1C4 antibody. Proteins were separated by CGE, Agilent 2100 Bioanalyzer. Internal control bands (240 kDa / 7 kDa / 4,5 kDa).

Background

Macrophage inhibitory cytokine-1 (MIC-1) is a member of the transforming growth factor- β superfamily that regulates a wide variety of physiological processes involved in tissue differentiation and maintenance (1). MIC-1 is synthesized as a 62-kDa intracellular protein, which, after cleavage by a furin like protease, is secreted as a 25-kDa disulphide-linked dimeric protein. Expression of MIC-1 results in inhibition of macrophage activation, regulated by the p53 pathway, in response to pro-inflammatory monokines (1,2). MIC-1 is involved in tumour pathogenesis and its measurement can be used as a clinical tool for the diagnosis of a wide range of cancers. It could be a useful marker for aggressive prostate cancer while MIC-1 is upregulated in advanced and more aggressive prostatic tumours (3).

References

1. **Hayes VM, Severi G, Southey MC, Padilla EJD, English DR, Hopper JL, Giles GG and Sutherland RL (2006).** Macrophage Inhibitory Cytokine-1 H6D Polymorphism, Prostate Cancer Risk, and Survival. *Cancer Epidemiology Biomarkers & Prevention* 15, 1223-1225
2. **Bootcov MR, Bauskin AR, Valenzuela SM, Moore AG, Bansal M, He XY, Zhang HP, Donnellan M, Mahler S, Pryor K, Walsh BJ, Nicholson RC, Fairlie WD, Por SB, Robbins JM and Breit SN (1997).** MIC-1, a novel macrophage inhibitory cytokine, is a divergent member of the TGF-beta superfamily. *Proc Natl Acad Sci U S A* 14;94(21):11514-9
3. **Bauskin AR, Brown DA, Kuffner T, Johnen H, Luo XW, Hunter M and Breit SN (2006).** Role of Macrophage Inhibitory Cytokine-1 in Tumorigenesis and Diagnosis of Cancer. *Cancer Research* 66, 4983-4986

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