

Product Data Sheet

anti-human IL13 receptor (IL13-R)

monoclonal antibody

Product information

Catalog Number:	GM-0104
Clone:	GM-1E7
Description:	purified monoclonal mouse antibody
Specificity:	anti-human IL13 receptor (IL13-R)
Isotype:	IgG1
Purification:	Protein G
Storage:	short term: 2°C - 8°C; long term: -20°C (avoid repeated freezing and thawing)
Buffer :	phosphate buffered saline, pH 7.2
Immunogen:	genetic immunisation with cDNA encoding human IL13-Rα1 (extracellular domain)
Selection:	based on recognition of the complete native protein expressed on transfected mammalian cells

Working dilutions

Flow cytometry:	1.2 µg/10 ⁶ cells
Immunofluorescence:	1 µg/10 ⁶ cells
CELISA:	1:200 - 1:400

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

Specificity testing by flow cytometry and by Spectral Confocal Microscopy

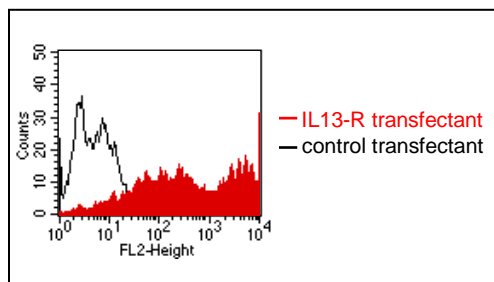


Fig.1: FACS analysis of BOSC23 cells using GM-1E6 Cat.# GM-0104. BOSC23 cells were transiently transfected with an expression vector encoding either IL13-R (red curve) or an irrelevant protein (control transfectant: black curve). Binding of GM-1E7 was detected with a PE-conjugated secondary antibody. A positive signal was obtained only with IL13-R transfected cells.

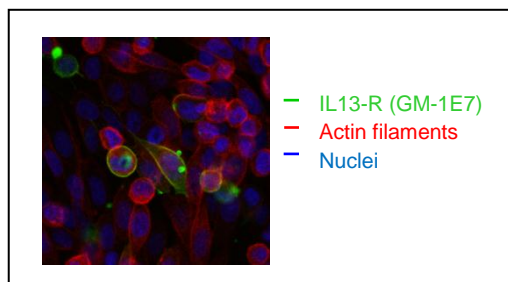


Fig.2: Spectral Confocal Microscopy of CHO cells using GM-1E7 Cat.# GM-0104. CHO cells were transiently transfected with an expression vector encoding IL13-R. Binding of GM-1E7 was visualized with a FITC-conjugated secondary antibody (green). Actin filaments are labeled with Alexa Fluor-555 Phalloidin (red). Cell nuclei are stained with DAPI (blue).

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Antagonistic Properties of GM-1E7

Specific inhibition of IL-13-dependent proliferation of TF-1 cells by GM-1E7

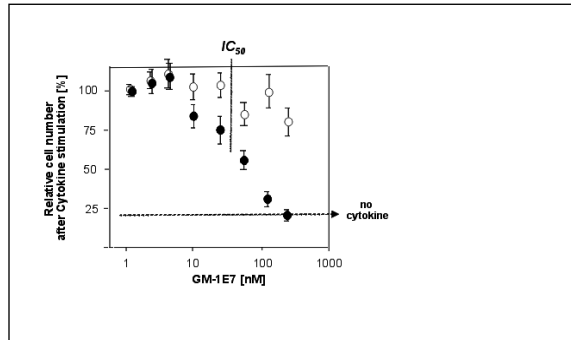


Fig 3: Dose-dependent inhibition of cellular proliferation. Samples of TF-1 cells were incubated for 72 h with 10 nM human IL-13 (closed circles) or 10 nM human IL-4 (open circles) plus the indicated concentrations of purified GM-1E7. Antibody GM1E7 blocks IL-13-dependent cell proliferation completely, but only marginally influences IL-4-activity on TF-1 cells.

SDS-PAGE analysis of GM-1E7

The antibody was purified by protein G affinity chromatography from cell culture supernatants and verified by SDS-Page (Fig.4).

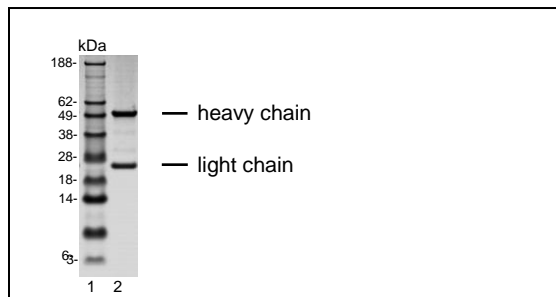


Fig.4: SDS-PAGE analysis of purified GM-1E7 monoclonal antibody. Lane 1: molecular weight marker, Lane 2: 2 µg of purified GM-1E7 antibody. Proteins were separated by SDS-PAGE and stained with RAPID Stain™ Reagent.

Background

Interleukin 13 (IL-13) is a T cell derived cytokine involved in the regulation of inflammatory and immune responses. IL-13R α 1 together with IL-4R α forms a functional receptor for both IL-4 and IL-13, which is why these two cytokines share many of their biological activities. The receptor is found on human B cells, monocytes and endothelial cells. However, no functional receptor is expressed on T cells, which explains why IL-13, in contrast to IL-4, fails to induce T_H2-cell differentiation.

References

1. **Myrtek et al. (2004):** Expression of interleukin-13 receptor alpha 1-subunit on peripheral blood eosinophils is regulated by cytokines. *Immunology* **112(4)**: 597-604.
2. **Krause et al. (2006):** Blockade of interleukin-13-mediated cell activation by a novel inhibitory antibody to human IL-13 receptor α 1. *Mol Immunol* **33**: 1799-1807