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/kappa	**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 immunization 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

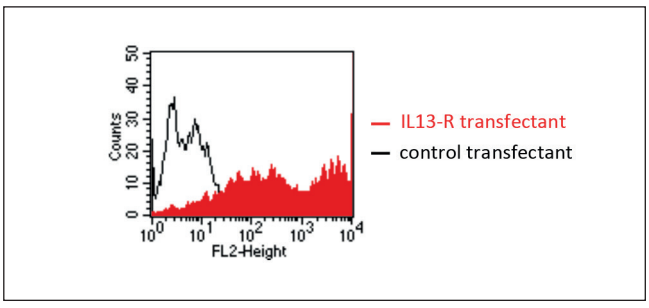

Fig. 1: FACS analysis of BOSC23 cells using GM-1E6 Cat.# GM-0104. BOSC23 cells were transiently transfected with an expression vector encoding either IL13-R (red curve) or an irrelevant protein (control transfectant: black curve). Binding of GM-1E7 was detected with a PE-conjugated secondary antibody.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

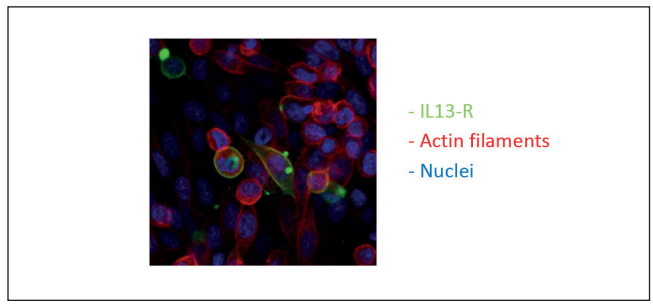

Fig. 2: Spectral Confocal Microscopy of CHO cells using GM-1E7 Cat.# GM-0104. CHO cells were transiently transfected with an expression vector encoding IL13-R. Binding of GM-1E7 was visualized with a FITC-conjugated secondary antibody (green). Actin filaments are labeled with Alexa Fluor-555 Phalloidin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

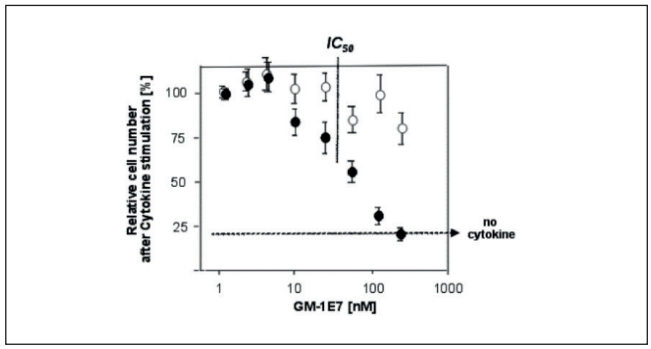

Fig. 3: Dose-dependent inhibition of cellular proliferation. Samples of TF-1 cells were incubated for 72 h with 10 nM human IL-13 (closed circles) or 10 nM human IL-4 (open circles) plus the indicated concentrations of purified GM-1E7. Antibody GM1E7 blocks IL 13-dependent cell proliferation completely,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

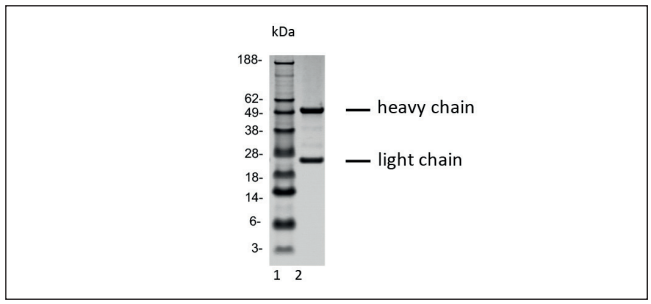

Fig. 4: SDS-PAGE analysis of purified GM-1E7 monoclonal antibody.
Lane 1: molecular weight marker, Lane 2: 2 µg of purified GM-1E7 antibody.
Proteins were separated by SDS-PAGE and stained with RAPID Stain™ Reagent.

BACKGROUND

Interleukin 13 (IL-13) is a T cell derived cytokine involved in the regulation of inflammatory and immune responses. IL-13Rα1 together with IL-4Rα 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 α1. Mol Immunol 33: 1799-1807

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