PRODUCT DATA SHEET
ANTI-HUMAN S100 CALCIUM BINDING PROTEIN A4 MONOCLONAL ANTIBODY

PRODUCT INFORMATION

Catalog Number:	GM-0908	**Clone:**	NJ-4F3
Description:	purified monoclonal mouse antibody	**Specificity:**	anti-human S100 calcium binding protein A4 (S100 A4)
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 S100 A4	**Selection:**	based on recognition of the complete native protein expressed on transfected mammalian cells

WORKING DILUTIONS

Flow cytometry:	1.2 µg/10^6 cells		
CELISA:	1:200 – 1:400	**ELISA:**	1:200 – 1:400
For each application a titration should be performed to determine the optimal concentration.			

SPECIFICITY TESTING BY FLOW CYTOMETRY

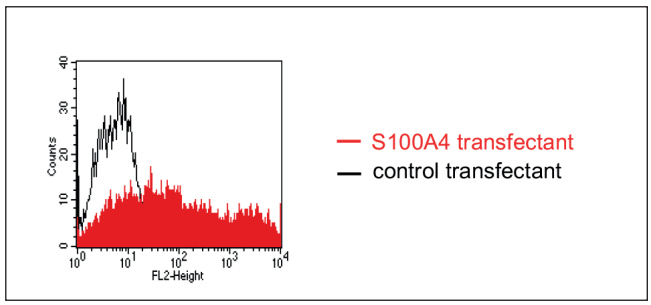

Fig. 1: FACS analysis of BOSC23 cells using NJ-4F3 Cat.# GM-0908. BOSC23 cells were transiently transfected with an expression vector encoding either S100 A4 (red curve) or an irrelevant protein (control transfectant: black curve). Binding of NJ-4F3 was detected with a PE-conjugated secondary antibody. A positive signal was obtained only with S100 A4 transfected cells.

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CGE ANALYSIS OF NJ-4F3

The antibody was purified by protein G affinity chromatography from cell culture supernatants and verified by CGE (Fig. 2).

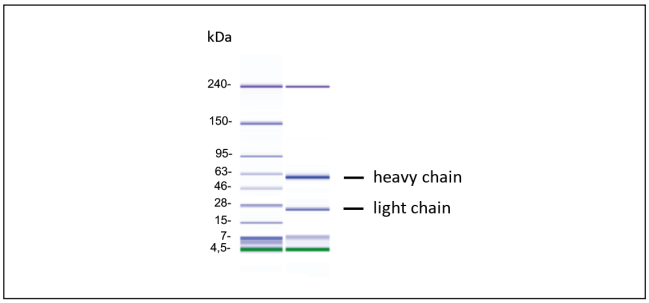

Fig. 2: CGE analysis of purified NJ-4F3 monoclonal antibody.
Lane 1: molecular weight marker, Lane 2: 2 µg of purified NJ-4F3 antibody. Proteins were separated by CGE (capillary gel electrophoresis, Agilent 2100 Bioanalyzer). Internal control bands (240 kDa / 7 kDa / 4,5 kDa).

BACKGROUND

S100 calcium binding protein A4 (S100A4) is a member of the S100 family of calcium-binding proteins that contain two Ca(2+)-binding sites including a canonical EF-hand motif. S100 proteins are localized in the cytoplasm and/or nucleus of a wide range of cells. S100A4 interacts with cytoskeletal proteins and enhances metastasis of several types of cancer cells. It is secreted by unknown mechanisms, thus, paracrinely stimulating a variety of cellular responses, including angiogenesis and neuronal growth (1). S100A4 has been shown to be a prognostic marker in a number of human cancers, including esophageal-squamous cancers, non-small lung cancers, primary gastric cancers, malignant melanomas, prostate cancers, bladder cancers, and pancreatic carcinomas. The universality of S100A4 expression in a variety of cancers illustrates the potential use of S100A4 as a marker for tumor metastasis and disease progression (2).

REFERENCES

1. ***Schneider M, Hansen JL, Sheikh SP (2008).*** S100A4: a common mediator of epithelial-mesenchymal transition, fibrosis and regeneration in diseases? J Mol Med Mar 6
2. ***Garrett SC, Varney KM, Weber DJ and Bresnick AR (2006).*** S100A4, a Mediator of Metastasis. J Biol Chem, 281 (2): 677–680

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