

Product Data Sheet

anti-human Receptor tyrosine-protein kinase ErbB-1 monoclonal antibody

Product information

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| Catalog Number: | GM-1001 |
| Clone: | DP-4A1 |
| Description: | purified monoclonal mouse antibody |
| Specificity: | anti-human Receptor tyrosine-protein kinase ErbB-1 (EGFR) |
| 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 ErbB-1 |
| Selection: | based on recognition of the complete native protein expressed on transfected mammalian cells |

Working dilutions

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|------------------------|------------------------------|
| Flow cytometry: | 1.2 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

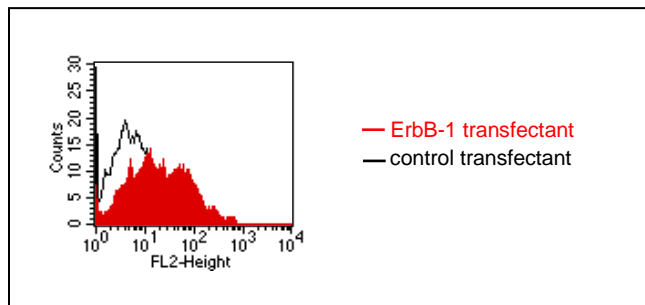


Fig.1: FACS analysis of BOSC23 cells using DP-4A1 Cat.# GM-1001. BOSC23 cells were transiently transfected with an expression vector encoding either ErbB-1 (red curve) or an irrelevant protein (control transfectant: black curve). Binding of DP-4A1 was detected with a PE-conjugated secondary antibody. A positive signal was obtained only with ErbB-1 transfected cells.

For research use only. Not for diagnostic or therapeutic use.

CGE (capillary gel electrophoresis, Agilent 2100 Bioanalyzer) analysis of DP-4A1

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

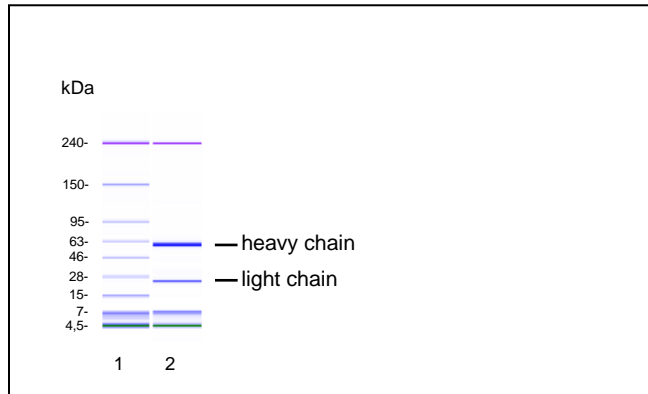


Fig.2: CGE analysis of purified DP-4A1 monoclonal antibody. Lane 1: molecular weight marker, Lane 2: 2 µg of purified DP-4A1 antibody. Proteins were separated by CGE (capillary gel electrophoresis, Agilent 2100 Bioanalyzer). Internal control bands (240 kDa / 7 kDa / 4,5 kDa).

Background

Epidermal growth factor receptor (EGFR; ErbB-1) is a 170-kDa transmembrane glycoprotein encoded by the HER1 proto-oncogene. It belongs to the EGFR family of receptors, a subfamily of four closely related receptor tyrosine kinases: EGFR (ErbB-1), HER2/c-neu (ErbB-2), Her3 (ErbB-3) and Her4 (ErbB-4). ErbB-1 is expressed on the cell surface and is activated by binding of its specific ligands, including epidermal growth factor and transforming growth factor α (TGF α). Growth factor binding to the extracellular domain of ErbB-1 induces formation of homo- and heterodimers with another member of the ErbB receptor family. The EGFR signaling pathway is one of the most important pathways that regulate growth, survival, proliferation and differentiation in mammalian cells, while over-expression of ErbB-1 have been associated with a number of cancers, including lung cancer and glioblastoma (2,3).

References

1. **Normanno N, Bianco C, Strizzi L, Mancino M, Maiello MR, De Luca A, Caponigro F and Salomon DS (2005).** The ErbB receptors and their ligands in cancer: an overview. *Curr Drug Targets* 6(3):243-57
2. **Harari PM (2004).** Epidermal growth factor receptor inhibition strategies in oncology. *Endocr Relat Cancer*. 11(4):689-708