Product Data Sheet

anti-human EphA2 receptor tyrosine kinase (EphA2)
monoclonal antibody

Product information

| Catalog Number: | GM-0901 |
| Clone:          | Kα-5H5  |
| Description:    | purified monoclonal mouse antibody |
| Specificity:    | anti-human EphA2 |
| 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 EphA2

Selection: based on recognition of the complete native protein expressed on transfected mammalian cells

Working dilutions

| Flow cytometry: | 1.2 µg/10⁶ cells |
| Immunofluorescence: | 1 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 and by Spectral Confocal Microscopy

**Fig.1**: FACS analysis of BOSC23 cells using Kα-5H5 Cat.# GM-0901. BOSC23 cells were transiently transfected with an expression vector encoding either EphA2 (red curve) or an irrelevant protein (control transfectant). Binding of Kα-5H5 was detected with a PE-conjugated secondary antibody. A positive signal was obtained only with EphA2 transfected cells.

**Fig.2**: Spectral Confocal Microscopy of CHO cells using Kα-5H5 Cat.# GM-0901. CHO cells were transiently transfected with an expression vector encoding EphA2. Binding of Kα-5H5 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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SDS-PAGE analysis of Kα-5H5

The antibody was purified by protein G affinity chromatography from cell culture supernatants and verified by SDS-Page (Fig.3).

![SDS-PAGE analysis](image)

**Fig.3:** SDS-PAGE analysis of purified Kα-5H5 monoclonal antibody. Lane 1: molecular weight marker, Lane 2: 2 µg of purified Kα-5H5 antibody. Proteins were separated by SDS-PAGE and stained with RAPID Stain™ Reagent.

**Background**

*EphA2 (Eph receptor tyrosine kinase A2)* belongs to the Eph tyrosine receptor family, the largest receptor tyrosine kinase family of transmembrane proteins. It encodes a 130 kDa transmembrane protein which is primarily found in adult human epithelial cells (1). Eph receptors and their ephrin ligands are important mediators of cell-cell communication and play roles in embryonic patterning, neuronal targeting, and vascular development during normal embryogenesis (2,3). The Eph family of receptor tyrosine kinases is frequently overexpressed in a wide variety of cancers and tumor cell lines. In particular, EphA2 is overexpressed in prostate, lung and colon cancers and 40% of breast cancers and it represent an attractive potential target for drug design (3,4).

**References**


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