

Product Data Sheet

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

Product information

Catalog Number:	GM-0901
Clone:	K α -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 μ g/10 ⁶ cells
Immunofluorescence:	1 μ g/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

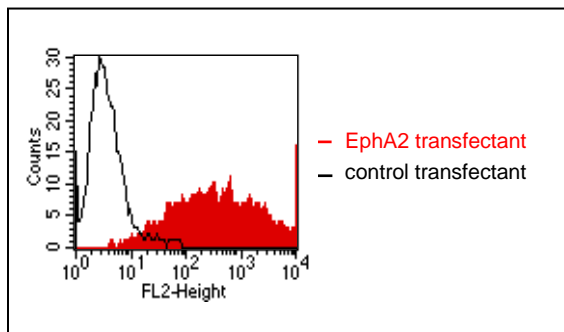


Fig.1: FACS analysis of BOSC23 cells using K α -5H5 Cat.# GM-0901. BOSC23 cells were transiently transfected with an expression vector encoding either EphA2 (red curve) or an irrelevant protein (control transfected). Binding of K α -5H5 was detected with a PE-conjugated secondary antibody. A positive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

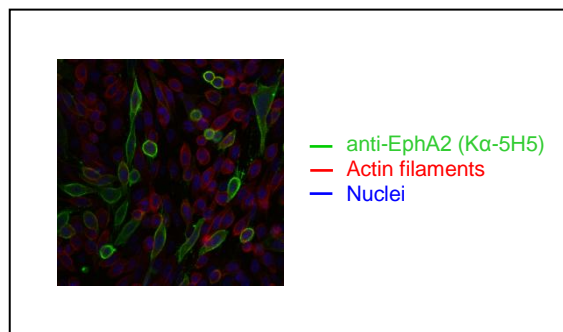


Fig.2: Spectral Confocal Microscopy of CHO cells using K α -5H5 Cat.# GM-0901. CHO cells were transiently transfected with an expression vector encoding EphA2. Binding of K α -5H5 was visualized with a FITC-conjugated secondary antibody (green). Actin filaments are labeled with Alexa Fluor-555 Phalloidin (red). Cell nuclei are stained with DAPI (blue).

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SDS-PAGE analysis of K α -5H5

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

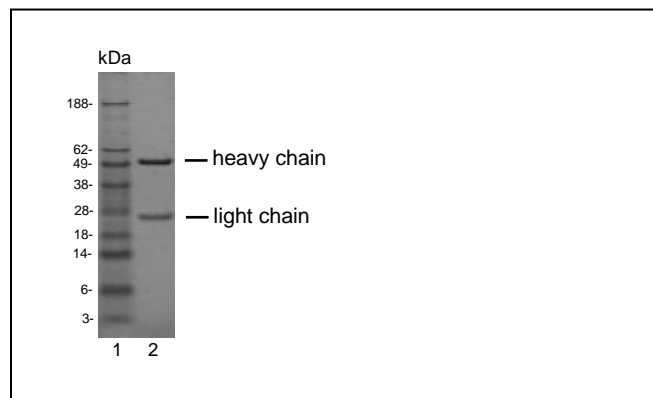


Fig.3: SDS-PAGE analysis of purified K α -5H5 monoclonal antibody. Lane 1: molecular weight marker, Lane 2: 2 μ g of purified K α -5H5 antibody. Proteins were separated by SDS-PAGE and stained with RAPID StainTM Reagent.

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

1. **Lindberg RA and Hunter T** (1990). cDNA cloning and characterization of eck, an epithelial cell receptor protein- tyrosine kinase in the Eph/elk family of protein kinases. *Mol Cell Biol* 10:6316–24.
2. **Brantley-Sieders d, Schmidt s, Parker M and Chen J** (2004). Eph receptor tyrosine kinases in tumor and tumor microenvironment. *Curr Pharm Des* 10(27):3431-42
3. **Nakamoto M and Bergmann AD** (2002). Diverse roles for the Eph family of receptor tyrosine kinases in carcinogenesis. *Microsc Res Tech* 1; 59(1):58-67
4. **Ireton RC and Chen J** (2005). EphA2 receptor tyrosine kinase as a promising target for cancer therapeutics. *Curr Canc Drug Targets* 5(3): 149-57