Mouse EpCAM/TROP-1 Alexa Fluor® 750-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # G8.8R

Catalog Number: FAB8998S

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse EpCAM/TROP-1.
Source	Monoclonal Rat IgG_{2A} Clone # G8.8R
Purification	Protein A or G purified from cell culture supernatant
Immunogen	TE-71 Thymic epithelial cell line
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	4T1 mouse breast cancer cell line

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Epithelial Cellular Adhesion Molecule (EpCAM), also known as EGP314 (Epithelial glycoprotein 314), TACSTD1 (tumor-associated calcium signal transducer 1) and CD326 is a 292 amino acid (aa), 40 kDa transmembrane glycoprotein composed of a 243 aa extracellular domain with two epidermal-growth-factor-like (EGF-like) repeats within the cysteine-rich N-terminal region, a 23 aa transmembrane domain, and a 26 aa cytoplasmic domain. Human and mouse EpCAM share 82% aa sequence identity. During embryonic development, EpCAM is detected in fetal lung, kidney, liver, pancreas, skin, and germ cells. EpCAM has been shown function as a homophilic Ca^{2+} independent adhesion molecule (1). Homophilic adhesion via EpCAM requires the interaction of both EGF-like repeats, with the first EGF-like repeat mediating reciprocal interaction between EpCAM molecules on opposing cells, while the second repeat is involved in lateral interaction of EpCAM. Lateral interaction of EpCAM lead to the formation of dimers and tetramers (2). During homophilic adhesion the cytoplasmic tail of EpCAM interacts with the actin cytoskeleton via a direct association α-actinin (3).

References:

1. Litvinow, S.V. *et al.* (1994) J. Cell Biol. **125**:437.
2. Balzar, M. *et al.* (2001) Mol. Cell. Biol. **21**:2570.
3. Balzar, M. *et al.* (1998) Mol. Cell. Biol. **18**:4388.

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