

**DESCRIPTION**

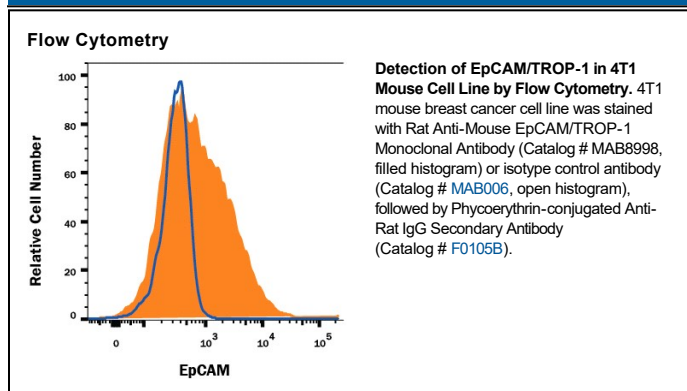
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse EpCAM/TROP-1.
<b>Source</b>	Recombinant Monoclonal Rat IgG <sub>2A</sub> Clone # G8.8R
<b>Purification</b>	Protein A or G purified from cell culture supernatant
<b>Immunogen</b>	TE-71 Thymic epithelial cell line
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Flow Cytometry</b>	2.5 µg/10 <sup>6</sup> cells	See Below
<b>CyTOF-reported</b>	Lujan, E. <i>et al.</i> (2015) Nature <b>521</b> : 352.	

**DATA**



**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**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<sup>2+</sup> 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.