

#### DESCRIPTION

|                                                                                                                                                                                                         |                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Mouse                                                                                  |
| <b>Specificity</b>                                                                                                                                                                                      | Detects recombinant mouse EpCAM/TROP-1 protein in direct ELISA.                        |
| <b>Source</b>                                                                                                                                                                                           | Monoclonal Rabbit IgG Clone # 3153C                                                    |
| <b>Purification</b>                                                                                                                                                                                     | Protein A or G purified from hybridoma culture supernatant                             |
| <b>Immunogen</b>                                                                                                                                                                                        | Mouse myeloma cell line, NS0-derived mouse EpCAM<br>Gln24-Thr266<br>Accession # Q99JW5 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 350<br>Excitation Wavelength: 346 nm<br>Emission Wavelength: 442 nm        |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                           |
| *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.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | 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 KS1/4, gp40, GA733-2, 17-1A, and TROP-1, is a 40 kDa transmembrane glycoprotein composed of a 242 amino acid (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. In human, EpCAM also shares 49% aa sequence homology with TROP-2/EGP-1. During embryonic development, EpCAM is detected in fetal lung, kidney, liver, pancreas, skin, and germ cells. In adults, human EpCAM is detected in basolateral cell membranes of all simple, pseudo-stratified, and transitional epithelia, but is not detected in normal squamous stratified epithelia, mesenchymal tissue, muscular tissue, neuro-endocrine tissue, or lymphoid tissue (1). EpCAM expression has been found to increase in actively proliferating epithelia tissues and during adult liver regeneration (1, 2). EpCAM expression is also found to increase in human malignant neoplasias, with most carcinoma expressing EpCAM including those of arising from squamous epithelia (1). EpCAM has been shown function as a homophilic  $Ca^{2+}$  independent adhesion molecule (3). 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 (4). During homophilic adhesion the cytoplasmic tail of EpCAM interacts with the actin cytoskeleton via a direct association  $\alpha$ -Actinin (5).

#### PRODUCT SPECIFIC NOTICES

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