# Active Recombinant Mouse Epcam Protein, Fc-tagged, Alexa Fluor 647 conjugated

**Cat. No.** Epcam-191MAF647 **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Alexa Fluor 647 conjugated recombinant Mouse Epcam(Gln24 & Arg81-Thr266) fused with Fc region of Mouse IgG2a at C-terminal was expressed in NS0. |
| **Species** | Mouse |
| **Source** | Mammalian Cells |
| **ProteinLength** | 81-266 a.a. |
| **Description** | Epithelial Cellular Adhesion Molecule (EpCAM), also known as KS1/4, gp40, GA733-2, 17-1A, CD326 and TROP-1, is a 40 kDa transmembrane glycoprotein composed of a 243 amino acid (aa) extracellular domain with two epidermal-growth-factor-like (EGF-like) repeats, a 23 aa transmembrane domain, and a 26 aa cytoplasmic domain. Human and mouse EpCAM share 82% aa sequence identity. In mouse, EpCAM also shares 51% aa sequence homology with Trop-2. EpCAM is detected in basolateral cell membranes of all simple epithelia and expression has been found to increase in epithelia tissues during fetal development. EpCAM has been shown to function as a homophilic Ca2+ independent adhesion molecule, but it does not structurally resemble any of the four major families of cell adhesion molecules. 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. EpCAM has |

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| | been identified as a surface marker for pluripotent embryonic stem cells and is strongly associated with the maintenance of the undifferentiated state of ESCs. EpCAM is highly expressed on the surface of epithelial cancer cells including colon, stomach, lung, pancreas, prostate and breast. |
| **Form** | Lyophilized |
| **Bio-activity** | Measured by the ability of the immobilized protein to support the adhesion of the L Cells mouse fibroblast cell line. When 5 × 10^4 cells/well are added to Recombinant Mouse EpCAM/TROP-1 and Human Fibronectin coated plates, cell adhesion is enhanced in a dose dependent manner. The ED50 for this effect is typically 0.4-2.4 μg/mL. |
| **Molecular Mass** | Predicted Molecular Mass: 55 kDa<br>SDS-PAGE: 58-75 kDa and 8 kDa |
| **N-terminal Sequence Analysis** | Arg 81 detected. Gln 24 inferred from enzymatic pyroglutamate treatment revealing Arg 25. |
| **Endotoxin** | < 0.1 EU/ μg of the protein by the LAL method. |
| **Purity** | > 95 % by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie Blue Staining. |
| **Characteristic** | Disulfide-linked homodimer<br>Labeled with Alexa Fluor 647 via amines<br>Excitation = 650 nm<br>Emission = 668 nm |
| **Storage** | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. |

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| | 12 months from date of receipt, -20 to -70 centigrade as supplied.<br>1 month, 2 to 8 centigrade under sterile conditions after reconstitution.<br>3 months, -20 to -70 centigrade under sterile conditions after reconstitution. |
| **Concentration** | 500 µg/mL |
| **Storage Buffer** | Lyophilized from a 0.2 µm filtered solution in PBS. |
| **Reconstitution** | Reconstitute at 500 µg/mL in PBS. |
| **Conjugation** | Alexa Fluor 647 |

## GENE INFORMATION

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| **Gene Name** | Epcam epithelial cell adhesion molecule [ Mus musculus ] |
| **Official Symbol** | Epcam |
| **Synonyms** | EPCAM; epithelial cell adhesion molecule; mEGP314; protein 289A; Trop-1 protein; lymphocyte antigen 74; epithelial glycoprotein 314; panepithelial glycoprotein 314; tumor-associated calcium signal transducer 1; EGP; Ly74; gp40; CD326; EGP-2; TROP1; Egp314; Ep-CAM; Tacsd1; GA733-2; Tacstd1; |
| **Gene ID** | 17075 |
| **mRNA Refseq** | NM_008532 |
| **Protein Refseq** | NP_032558 |
| **UniProt ID** | Q99JW5 |

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