

Product Specification Sheet

**Antibody to Human Epithelial Specific Antigen (ESA/EpCAM-1/CD326)**

**Cat #** ESA11-M Monoclonal Anti-Human Epithelial Specific Antigen (ESA/EpCAM-1/CD326) IgG

**SIZE:** 100 ug

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This 9-exon gene encodes a carcinoma-associated antigen and is a member of a family that includes at least two type I membrane proteins. This antigen is expressed on most normal epithelial cells and gastrointestinal carcinomas and functions as a homotypic calcium-independent cell adhesion molecule. The antigen is being used as a target for immunotherapy treatment of human carcinomas.

**FUNCTION:** SwissProt: P16422 # GA733 tumor-associated antigen gene family may function as growth factor receptors.

**SIZE:** 314 amino acids; 34932 Da

**SUBCELLULAR LOCATION:** Membrane; Single-pass type I membrane protein.

**TISSUE SPECIFICITY:** This protein is expressed in almost all epithelial cell membranes but not on mesodermal or neural cell membranes. Found on the surface of adenocarcinomas.

**SIMILARITY:** SwissProt: P16422 ## Contains 1 thyroglobulin type-1 domain

**Alternate name:** Muscarinic; ESA; EpCAM-1; CD326  
Entrez Gene Number: NM\_002354.1

**Source of Antigen and Antibodies**

**Antigen:** NCI-H69 small cell lung carcinoma cells

**Antibody Host:** Mouse

**Antibody Type:** Monoclonal

**Isotype:** IgG1

**Buffer:** PBS, pH 7.5, 0.1% BSA, 0.05% azide

**Concn:** Lot sp. concn provided on the vial

**Recommended Secondary Antibodies:** Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available).

**Form & Storage**

**Purified IgG**

100ul solution lyophilized powder  
Buffer: Citrate-NaCl, pH 6.00.05% sodium azide  
**Reconstitute powder** 100 ul of PBS

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4oC.

**Long-term:** at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20oC or below.

**Shipping:** 4oC for solutions and room temp for powder.

**Specificity and crossreactivity**

This antibody recognizes a 40kDa transmembranous epithelial glycoprotein expressed on baso-lateral cell surfaces in very many epithelial tissues (but absent from mesothelial tissues). The extracellular domain has a cysteine-rich repeat and a small domain with homology to nidogen. It is a homophillic cell-cell adhesion molecule, recently called Ep-CAM (Litvinov et al., 1994). This molecule is also detected by antibodies such as 323/A3, BER-EP4, 17-1A, AUA1, KS1/4, MOC-31, GA733, HEA 125 and others). It reacts with most epithelial cells and carcinoma

**Recommended Usage**

ELISA (0.1-1 ug/ml)

Western Blotting ( 1-2 ug/ml)

Immunohistochemistry, Immunohistochemistry (Paraffin) @ 2-10 ug/ml

Optimal concn for a given application should be optimized.

\*This product is for In vitro research use only.

**Related material available from ADI**

ESA11-M

90526A

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