

## *ImmunoBioScience Corp. (IBSC)*

### *DATA SHEET*

#### **Epithelial Specific Antigen (ESA)/ Ep-CAM, Mouse MAb anti-human**

<b>Catalog number:</b> MM-1014-01	0.5 ml	Concentrated	IgG1	0.2 mg/ml
MM-1014-02	1.0 ml	Concentrated	IgG1	0.2 mg/ml
MM-1014-04	7.0 ml	Prediluted for IHC	IgG1	5µg/ml
MM-1014-15	0.5 ml	FITC~conjugated	IgG1	0.2 mg/ml
MM-1014-16	1.0 ml	FITC~conjugated	IgG1	0.2 mg/ml

**Buffer:** The concentrated antibodies (Protein A purified) are supplied in PBS with 1% BSA, 0.05% azide, pH 7.4. The Prediluted antibody is supplied in our Universal antibody dilution buffer (AR-6526) green in color.

**Description:** Epithelial is a transmembrane glycoprotein (40 kDa) also known as ESA or epithelial cellular adhesion molecule (Ep-CAM). This protein is expressed on basolateral cell surface in most simple epithelia and vast majority of cancers. According to the "Cancer Stem Cells"(CSC) theory, tumors are not viewed as simple monoclonal expression of transformed cells, but rather as complex tissue where abnormal growth is driven by a minority pathological CSC pool that on one hand has acquired tumor related features such as uncontrolled growth and ability to form metasis and on the other hand maintains its inherent capacity to self renew and differentiate into a phenotypic ally heterogeneous, although aberrant progeny. This antibody has been used recently to characterize the EpCAM high CD44+ versus EpCAM low/Cd44- indifferent cancer cells.

**Intended Use:** Immunohistochemistry (IHC) and Immunocytochemistry (ICC)  
Immunofluorescence (IF), Flow cytometry (not tested at our lab).

**Storage:** 2-8°C

**Clone:** ESA 214

**Isotype:** IgG1/κ

**Epitope:** Not determined

**Molecular weight of antigen:** 40 kDa

**Immunogen:** Small cell lung carcinoma

**Species reactivity:** Human, others –not-tested.

**Cellular Localization:** Cell membrane

**Recommended positive control:** Breast carcinoma

**Application:** IHC, ICC (frozen or formalin-fixed paraffin-embedded (FFPE) tissue sections, cell smears.

For IHC dilute conc. antibodies 1:50-1:100, use streptavidin~biotin system or polymer system, incubate 30 minutes at room temperature.

Prediluted antibody is ready to be used for IHC.

.(Antigen retriever like pepsin enhances the staining of FFPE tissue, please see data sheet for pepsin cat. # AR-6543.

IF, FITC~conjugated antibodies 10-20 µg/ml (1:10-1:20), incubate for 2 hours in the dark at RT or it can also be incubated overnight at 4°C.

Flow: FITC~conjugated antibodies, 0.2-1.0 µg/0.1 ml (1:200-1:1,000) (Not tested in our lab).

The optimum dilution should be determined by the individual lab.

#### **General References**

1. Litvinov, SV et. al. J cell Biol. 125: 437-446, 1994
2. Tsubura, et. al. J Cutan Pathol. 19: 73-79, 1992

3. Reya, T et.al. Nature 414: 105-111, 2001
4. Dalerba, P et al. Ann. Rev. Med. 58: 267-287, 2007
5. Jordan, CT et. al. N Engl. J Med. 355: 1253-1261 20065.
7. Went, P et.al. Brit. J Cancer 94: 128-135, 20066.

**Limitation and warranty:** Our warranty is limited to the actual price paid for the product. We are not liable for any property damage, personnel injury, time, effort or economic loss due to our product.

**MSDS:** This product contains 0.05 % sodium azide as a preservative, appropriate care should be taken in handling. National Institute of Occupational Safety and Health has warning that sodium azide can react with lead, copper, brass or solder in the plumbing system and forms hydrazoic acid in acidic condition. Discard with copious amount of water. Avoid skin and eye contact with all laboratory products. Use appropriate lab. gear, lab coat , gloves and safety glasses. Do not ingest any lab products. This product is not approved for administration in human or animals.

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