

## Epithelial Membrane Antigen (MUC1, CD227); Clone E29

Catalog Number	Format	Volume
A00008-0002	(Ready-To-Use)	2 ml
A00008-0007	(Ready-To-Use)	7 ml
A00008-0025	(Ready-To-Use)	25 ml
A00008-C.1	(Concentrate)	0.1 ml
A00008-C	(Concentrate)	1 ml

### Intended Use

For In Vitro Diagnostic use. This antibody is intended for the qualitative visualization of the anatomical elements listed in the Specificity section. It is intended to be used within an Immunohistochemistry (IHC) procedure on formalin-fixed paraffin-embedded (FFPE) human tissue followed by visualization by light microscopy. Any diagnostic interpretation of the results of this antibody is to be complemented by morphological studies using proper controls and should be evaluated within the context of the patient's clinical history and other diagnostic tests by a qualified pathologist.

### Description

**Titer/Working Dilution:** Ready-to-Use: No further dilution required.

Concentrate: Suggested dilution is 1:300-600

**Species:** Mouse  
**Immunogen:** Delipidated extract of human milk fat globule membranes.  
**Clone:** E29  
**Isotype:** IgG2a, lambda.  
**Entrez Gene ID:** 4582 (Human)  
**Hu Chromosome Loc.:** 1q22

**Synonyms:** Breast carcinoma-associated antigen DF3, CA15-3, Carcinoma-associated mucin Episialin, Epithelial Membrane Antigen, H23AG, KL-6, MAM6, MUC-1, MUC-1/SEC, MUC-1/X, MUC1-alpha, MUC1-beta, MUC1-CT, MUC1-NT, MUC1/ZD, Mucin 1 cell surface associated, Mucin-1 subunit beta, Peanut-reactive urinary mucin, PEM, PEMT, Polymorphic epithelial mucin, PUM, Tumor-associated epithelial membrane antigen, Tumor-associated mucin.

**Mol. Wt. of Antigen:** 265-400kDa  
**Format:** Ready-To-Use antibody has been pretitered and quality controlled to work on formalin-fixed paraffin-embedded as well as acetone fixed cryostat tissue sections. No further titration is required.

Concentrate antibody is provided at 200µg/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% Sodium Azide.

**Specificity:** In Western blotting, this antibody recognizes proteins in a MW range of 265-400kDa, identified as different glycoforms of MUC1. This antibody reacts with the DTRP epitope within the tandem repeats. In immunohistochemical assays, it superbly stains routine formalin/paraffin carcinoma tissues. An antibody to MUC1 is useful as a pan-epithelial marker for detecting early metastatic loci of carcinoma in bone marrow or liver.

**Background:** MUC1 is proteolytically cleaved into alpha and beta subunits that form a heterodimeric complex consisting of the N-terminal alpha subunit and the C-terminal beta subunit. The alpha subunit of MUC1 has cell adhesive properties. It can act both as an adhesion and an anti-adhesion protein. MUC1 may provide a protective layer on epithelial cells against bacterial and enzymatic

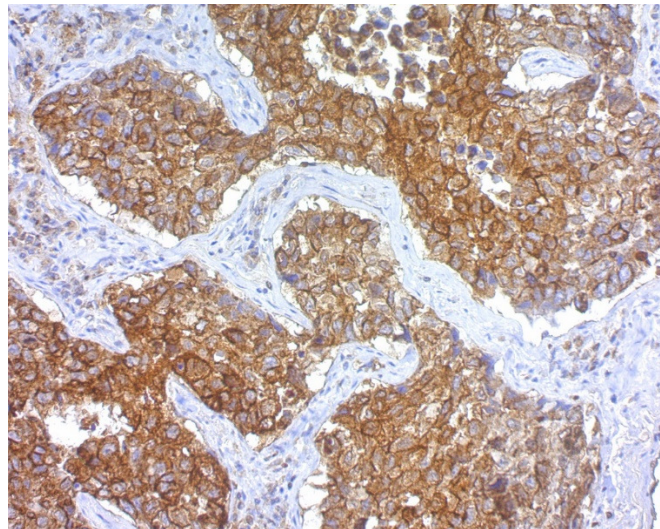
attack. The beta subunit contains a C-terminal domain, which is involved in cell signaling through phosphorylation and protein-protein interactions.

**Species Reactivity:** Human. Reacts moderately with pig and dog. Others-not known.

**Positive Control:** MCF-7 or MDA-231 cells. Breast, colon, ovarian, LSCC, or endometrial carcinoma.

**Cellular Localization:** Cytoplasmic & Cell Surface.

**Microbiological State:** Nonsterile.



Human Lung Squamous Cell Carcinoma stained using Epithelial Membrane Antigen (EMA, MUC1, CD227); Clone E29. Pretreatment with Tris-EDTA HIER Solution pH 9.0 for 5 minutes, PolyTek Anti-Mouse Polymerized HRP and DAB Chromogen/Substrate (High Contrast). Counterstained with Hematoxylin, Mayer's (Lillie's Modification). Final magnification 200X.

### Materials and Reagents Required but not Provided

- Control tissue and reagents
- Xylene, graded alcohols, and deionized/distilled water
- Antibody Diluent.
- IHC detection system. Suggested: ScyTek Cat# ABZ125 "CRF Anti-Polyvalent HRP Polymer" and ScyTek Cat# ACV500 "DAB Chromogen/Substrate Kit (High Contrast)".
- Wash buffer for rinses (ScyTek Cat# TBT500)
- HIER Retrieval Solution
- Hematoxylin counterstain and bluing reagent (ScyTek Cat# HMM500 and BRT500)
- Mounting medium and coverslips


**Note:** ScyTek Laboratories has a wide range of IHC reagents and ancillaries that can be found at [scytek.com](http://scytek.com).

### Procedure


1. **Tissue Section Pretreatment (Required):** Staining of formalin fixed, paraffin embedded tissue sections is significantly enhanced by pretreatment with pH 8-9 HIER Solution (see ScyTek catalog# ETA or TES for instructions).

2. **Primary Antibody Incubation Time:** We suggest an incubation period of 30 minutes at room temperature. However, depending upon the fixation conditions and the staining system employed, optimal incubation should be determined by the user.

Storage: 2° C  8° C

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3. **Visualization:** For maximum staining intensity we recommend the "CRF Anti-Polyvalent HRP Polymer" (ScyTek catalog# ABZ125, see IFU for instructions) combined with the "DAB Chromogen/Substrate Bulk Pack (High Contrast)" (ScyTek catalog# ACV500, see IFU for instructions).

#### **Storage and Stability**

Do not Freeze. Store at 2-8°C. Return to 2-8° immediately after use. Do not use after expiration date printed on label. Verify visually that antibody has not been contaminated before use. Do not use if reagent becomes cloudy or precipitates.

#### **Limitations**

Immunohistochemistry is a complex technique involving both histological and immunological detection methods. Tissue processing and handling prior to immunostaining can cause inconsistent results. Variations in fixation and embedding or the inherent nature of the tissue specimen may cause variations in results. Endogenous peroxidase activity or pseudoperoxidase activity in erythrocytes and endogenous biotin may cause non-specific staining depending on detection system used. This data sheet's recommendations and procedures were validated using ScyTek IHC reagents and may not be suitable for other detection systems.

#### **Precautions**

1. Contains Sodium Azide as a preservative (0.09% w/v), do not ingest. Sodium Azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. This product contains no hazardous material at a reportable concentration according to U.S. 29 CFR 1910.1200, OSHA Hazardous Communication Standard and EC Directive 91/155/EC.
2. Do not pipette by mouth.
3. Avoid contact of reagents and specimens with skin and mucous membranes.
4. Avoid microbial contamination of reagents or increased nonspecific staining may occur.
5. The user must validate any procedures and recommendations that differ from this data sheet.
6. The SDS may be found at [scytek.com](http://scytek.com)

#### **References**

1. Majumdar K, Tyagi I, Saran RK, Sakhuja P, Sharma A. Medulloblastoma with focal divergent/teratoid differentiation. Brain tumor pathology. 2013 Jan;30(1):50-6.
2. Carvounis EE, Smyrniotis V, Chatziioannou A, Paphitis A. Undifferentiated carcinoma with osteoclast-like giant cells of the pancreas. International journal of gastrointestinal cancer. 2003 Jun;33(2):103-6.
3. Cordell J et al. 1985. Br J Cancer 52(3):347-54.
4. Heyderman E et al. 1985. Br J Cancer 52(3):355-61.

#### **Warranty**

No products or "Instructions For Use (IFU)" are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our IFU or website. Our warranty is limited to the actual price paid for the product. ScyTek Laboratories, Inc. is not liable for any property damage, personal injury, time or effort or economic loss caused by our products.

Storage: 2° C



8° C



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