# Epithelial Membrane Antigen (EMA) (E29)

## Mouse anti-human Epithelial Membrane Antigen (EMA) Monoclonal Antibody (Clone E29)

**REFERENCES AND PRESENTATIONS**[1]

- **ready-to-use (manual or LabVision AutoStainer)**
  MAD-001100QD–3
  MAD-001100QD–7
  MAD-001100QD–12
- **Ready-to-use (MD-Stainer)**[2]
  MAD-001100QD-3/V
  MAD-001100QD/V
- **concentrated**
  MAD-001100Q - 1:100 recommended dilution

**COMPOSITION**
Anti-human EMA mouse monoclonal antibody purified from serum and prepared in 10mM PBS, pH 7.4, with 0.2% BSA and 0.09% sodium azide
**INTENDED USE** IVD: Immunohistochemistry (IHC) on paraffin embedded tissues. Not tested on frozen tissues or Western-Blotting
**CLONE:** E29
**Ig ISOTYPE:** mouse IgG2a/k
**IMMUNOGEN:** Delipidated extract of human milk fat globule membranes
**SPECIES REACTIVITY:** In vitro diagnostics in humans. Not tested in other species
**DESCRIPTION AND APPLICATIONS**: Anti-EMA antibody is a useful marker for staining many carcinomas. It stains normal and neoplastic cells from various tissues, including mammary epithelium, sweat glands and squamous epithelium. Hepatocellular carcinoma, adrenal carcinoma and embryonal carcinomas are consistently EMA negative, so keratin positivity with negative EMA favours one of these tumours. EMA is frequently positive in meningioma, which can be useful when distinguishing it from other intracranial neoplasms, e.g. Schwannomas. The absence of EMA can also be of value since negative EMA staining is characteristic of some tumours including adrenal carcinoma, seminomas, paraganglioma and hepatoma.

Many mesotheliomas, epithelioid and synovial sarcomas, chordomas, choroid plexus tumors, nodular lymphocyte-predominant Hodgkin lymphoma, anaplastic CD30 / ALK positive lymphomas and myelomas are positive; occasionally some small round cell tumours and small cell sarcomas, T null phenotype or CD56 / CD57 + T / NK lymphomas are positive. Other lymphomas, basal cell carcinomas, hepatocellular carcinomas, melanomas, endocrine neoplasms and soft tissue tumours are consistently negative.

**IHC POSITIVE CONTROL**: Tonsil, Breast
**VISUALIZATION:** Cell membrane and cytoplasm

**IHC RECOMMENDED PROCEDURE:**
- 4µm thick section should be taken on charged slides; dry overnight at 60ºC
- Deparaffinise, rehydrate and HIER (heat induced epitope retrieval) – boil tissue in the Pt Module using Vitro S.A EDTA buffer pH8[3] for 20 min at 95ºC. Upon completion rinse with 3-5 changes of distilled or deionised water followed by cooling at RT for 20 min
- Endogenous peroxidase block - Blocking for 10 minutes at room temperature using peroxidase solution (ref. MAD-021540Q-125)
- Primary antibody: incubate for 10 minutes [The antibody dilution (when concentrated) and protocol may vary depending on the specimen preparation and specific application. Optimal conditions should be determined by the individual laboratory]
- For detection use Master Polymer Plus Detection System (HRP) (DAB included; ref. MAD-000237QK)
- Counterstaining with haematoxylin and final mounting of the slide

**STORAGE AND STABILITY:** Stored at 2-8ºC. Do not freeze. Once the packaging has been opened it can be stored until the expiration date of the reagent indicated on the label. If the reagent has been stored under other conditions to those indicated in this document, the user must first check its correct performance taking into account the product warranty is no longer valid.

[1] These references are for presentation in vials of Low Density Polyethylene (LDPE) dropper. In case the products are used in automated stainers, a special reference is assigned as follows:
- / L: Cylindrical screw-cap vials (QD-3 / L, QD-7 / L, QD-12 / L).
- / N: Polygonal screw-cap vials (QD-3 / N, QD-7 / N, QD-12 / N).
For different presentations (references / volumes) please contact the supplier.

[2] For Technical specifications for MD-Stainer, please contact your distributor.

[3] Ref: MAD-004072R/D

**Vitro S.A**
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CE IVD

Rev.: 2020-09-21

**WARNINGS AND PRECAUTIONS:**

1. Avoid contact of reagents with eyes and mucous membranes. If reagents come into contact with sensitive areas, wash with copious amounts of water.
2. This product is harmful if swallowed.
3. Consult local or state authorities with regard to recommended method of disposal.
4. Avoid microbial contamination of reagents.

**SAFETY RECOMMENDATIONS**

This product is intended for laboratory professional use only. The product is NOT intended to be used as a drug or for domestic purposes. The current version of the Safety Data Sheet for this product can be downloaded by searching the reference number at www.vitro.bio or can be requested at regulatory@vitro.bio.

**BIBLIOGRAPHY**


1. Delsol G, Gatter K C, Stein H. Human lymphoid cells express epithelial membrane antigen. Lancet. **Ii**; 1124-1129. 1984.
2. Wells C A, Heryet A, Brochier J. The immunocytochemical detection of axillary micrometastases in breast cancer. British Journal of Cancer; **50**: 193-197. 1984.
3. Pinkus G S and Kurtin P J. Epithelial membrane antigen-a diagnostic discriminant in surgical pathology. Human Pathology. **16**: 929-940. 1985.
4. Schnitt S J and Vogel H. Meningiomas. Diagnostic value of immunoperoxidase staining for epithelial membrane antigen. American Journal of Surgical Pathology; **10**: 640-649. 1986.
5. Gabriel M, Obrebowska A and Spaczynski M. Bone marrow involvement in ovarian cancer by immunohistochemical assessment. Ginekol Pol; **70** (11): 819-823.1999.


**LABEL AND BOX SYMBOLS**

Explanation of the symbols of the product label and box:

| | |
|---|---|
|  | Expiration date |
|  | Temperature limit |
|  | Manufacturer |
|  | Sufficient content for <n> assays |
|  | Catalog number |
|  | Lot code |
|  | Refer to the instructions of use |
|  | Medical product for *in vitro* diagnosis. |
|  | Material safety data sheet |


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