CD71 (10F11)

Mouse anti-human CD71 Monoclonal Antibody (Clone 10F11)

REFERENCES AND PRESENTATIONS[1]

- **ready-to-use (manual or LabVision AutoStainer)**
  MAD-000528QD–3
  MAD-000528QD–7
  MAD-000528QD–12
- **Ready-to-use (MD-Stainer)**[2]
  MAD-000528QD-3/V
  MAD-000528QD/V
- **concentrated**
  MAD-000528Q - 1:50 recommended dilution

COMPOSITION
Anti-human CD71 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: 10F11
Ig ISOTYPE: Mouse IgG2b
IMMUNOGEN: Prokaryotic recombinant protein.
SPECIES REACTIVITY: In vitro diagnostics in humans. Not tested in other species
DESCRIPTION AND APPLICATIONS:
CD71 recognizes a 90kDa glycoprotein encoded by a gene located in the chromosomal region 3q29. It is a recirculating molecule between extra- and intracellular environment, located on the surface of all proliferating cells, which has an important role in the transcellular transport of iron. It is specifically expressed on the surface of the precursor cells of erythroid line, with reduced expression in reticulocytes and complete loss of expression in mature erythroid elements.
In normal tissues is a useful marker in identifying erythroid precursors or dispoyetic cells of the normal bone marrow as the other cells of myeloid lineage or mature erythroid cells are negative. Other cells that can normally express the antibody are placental syncytiotrophoblasts, myocytes, basal keratinocytes, hepatocytes, cells of pancreatic Langerhans islet and spermatocytes.
In tumoral lesions CD71 is a marker with diagnostic value for cases of erythroid leukemia, while the dysplastic erythroid precursors have a decreased expression. In all these cases, compared with the staining of Anti-Haemoglobin and glycophorin A antibodies, CD71 is more sensitive and specific for not presenting reaction with the mature erythroid elements, facilitating the interpretation. Similar results are obtained in biopsies fixed in Zenker's fixative or paraffin. Except erythroid leukemias, the antibody is negative in all primary tumors or metastatic bone marrow lessions.
In extramedullary lymphomas, the antibody is positive in isolated cases of diffuse large B-cell lymphoma, peripheral T cell lymphomas, large cell anaplastic lymphomas and in the Reed-Sternberg cells of Hodgkin lymphoma.
In breast carcinomas, CD71 expression was detected in a group of tumours with luminal and basal genotype (more common in medullary carcinoma) resistant to treatment with Tamoxifen. In experimental studies on breast carcinomas, models using antibodies directed against CD71, an inhibition of cell proliferation and survival has been observed, suggesting CD71 as a possible new therapeutic target in cases of CD71 positive carcinoma.

IHC POSITIVE CONTROL: Bone marrow
VISUALIZATION: Cell cytoplasm and membrane

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

[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

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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.

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. Kashuba VI, Gizatullin RZ, Protopopov AI, Allikmets R, Korolev S, Li J, Boldog F, Tory K, Zabarovska V, Marcsek Z, Sumegi J, Klein G, Zabarovsky ER, Kisselev L. NotI linking/jumping clones of human chromosome 3: mapping of the TFRC, RAB7 and HAUSP genes to regions rearranged in leukemia and deleted in solid tumors. FEBS Lett. 1997;419:181-185
2. Marsee DK, Pinkus GS, Yu H. CD71 (transferrin receptor): an effective marker for erythroid precursors in bone marrow biopsy specimens. Am J Clin Pathol. 2010;134:429-435
3. Dong HY, Wilkes S, Yang H. CD71 is selectively and ubiquitously expressed at high levels in erythroid precursors of all maturation stages: a comparative immunochemical study with glycophorin A and hemoglobin A. Am J Surg Pathol. 2011;35:723-732
4. Zuo Z, Polski JM, Kasyan A, Medeiros LJ. Acute erythroid leukemia. Arch Pathol Lab Med. 2010 Sep;134(9):1261-70
5. Habashy HO, Powe DG, Staka CM, Rakha EA, Ball G, Green AR, Aleskandarany M, Paish EC, Douglas Macmillan R, Nicholson RI, Ellis IO, Gee JM. Transferrin receptor (CD71) is a marker of poor prognosis in breast cancer and can predict response to tamoxifen. Breast Cancer Res Treat. 2010;119:283-293

LABEL AND BOX SYMBOLS

Explanation of the symbols of the product label and box:

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