NKX2.2 (EP336)

Rabbit anti-NKX2.2 Monoclonal Antibody (clone EP336)

REFERENCES AND PRESENTATIONS[1]

- **ready-to-use (manual or LabVision AutoStainer)**
  MAD-000772QD–3
  MAD-000772QD–7
  MAD-000772QD–12
- **Ready-to-use (MD-Stainer)**[2]
  MAD-000772QD-3/V
  MAD-000772QD/V
- **concentrated**
  MAD-000772Q - 1:50 recommended dilution

COMPOSITION
Rabbit anti-NKX2.2 monoclonal antibody obtained from purified ascitic fluid 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: EP336
Ig ISOTYPE: IgG
IMMUNOGEN: synthetic peptide corresponding to the human NKX2.2 protein
SPECIES REACTIVITY: In vitro diagnostics in humans. Not tested in other species
DESCRIPTION AND APPLICATIONS:
The NKX2.2 antibody, also known as NK2 or NKX2B, is a nuclear transcription factor that belongs to the NK2 family of homeobox genes and is encoded in the chromosome region 20p11.22. This gene is involved in the development of beta cells of the pancreas that produce insulin, as well as in the neuroendocrine, glial, neuronal and oligodendroglial differentiation. Likewise, it is also involved in several process of diencephalic development and organization as well as in the control of the genes involved in the axonal orientation.
In normal mature tissues, the NKX2.2 antigen is expressed in the neuroendocrine cells of the islets of Langerhans of the pancreas, the enterochromaffin cells of the gastrointestinal tract and the oligodendrocytes.
In neoplasias, the functional analysis has showed that the NKX2.2 gene is necessary for the oncogenic transformation of the Ewing's sarcoma. Thus, this antibody has proved its usefulness in the diagnosis of this tumor, where the presence of a minimum of 5% of tumor cells with moderate/intense nuclear staining is considered positive. In the Ewing's sarcoma, the NKX2.2 antibody shows a sensitivity of 93% and a specificity of 89%. Although the expression of the NKX2.2 antigen is closely related to the EWSR1-FLI1 fusion, the cases with EWSR1-ERG fusion have also given positive results.
Other sarcomas and small round cell tumors with positivity against the NKX2.2 antibody are the olfactory neuroblastoma and the teratocarcinosarcoma, as well as a small part of small cell carcinomas, the CIC-DUX4 sarcomas, the neuroblastoma, the synovial sarcoma, the mesenchymal chondrosarcoma or the melanomas.
The NKX2.2 antibody also recognizes the gastrointestinal and pancreatic neuroendocrine tumors and, therefore, in conjunction with the PDX-1 and CDX2 markers, it has a diagnostic usefulness in the vast majority of neuroendocrine tumors.

IHC POSITIVE CONTROL: Tissue section from normal pancreas; Merkel cell carcinoma or Ewing sarcoma
VISUALIZATION: Nuclear

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 30 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]

[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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- 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

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5. Machado I, Yoshida A, López-Guerrero JA, Nieto MG, Navarro S, Picci P, Llombart-Bosch A. Immunohistochemical analysis of NKX2.2, ETV4, and BCOR in a large series of genetically confirmed Ewing sarcoma family of tumors. Pathol Res Pract. 2017 Sep;213(9):1048-1053.
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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

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CE IVD