CE IVD

Mouse anti-TTF-1

Cat. No.: AIB-30175 (1 ml Concentrate); AIB-30176 (0.5 ml Concentrate); AIB-30174 (6 ml Ready-to-use)

Instructions for use

Intended use

This antibody is designed for the specific localisation of thyroid transcription factor-1 (TTF-1) antigen in formalinfixed, paraffin-embedded tissue sections. Anti-TTF-1 antibody is intended for in vitro diagnostic use.

Specifications

Specificity:	TTF-1
Immunogen:	Recombinant protein corresponding to TTF-1 protein of rat
Clone:	8G7G3/1
Isotype:	Mouse IgG1a kappa
Species reactivity:	Human +, mouste +, rat +, others not tested

Summary and Description

Thyroid transcription factor-1 (TTF-1) is also known as thyroid-specific enhancer-binding protein (T/EBP). It is a 40 kDa protein which belongs to the NKx2 homo domain transcription factor family and regulates specific genes in thyroid glands and lungs. TTF-1 is a selective marker for adenocarcinomas of these tissues. It stains positive in nuclei of epithelial cells of thyroid glands and lung. Other organs are TTF-1 negative. TTF-1 antibody is extremely useful to differentiate between adenocarcinomas of lung and metastatic breast carcinomas and mesotheliomas. Nakamura et al. (2001) detected TTF-1 in fetal and adult hypothalamus of rats.
Moreover, the antibody of clone 8G7G3/1 reacts with an unknown antigen in the cytoplasm of hepatocytes. Due to this side-reaction the antibody can be used for differential diagnosis of liver cell tumours. This was shown by several studies (amongst others: Lei et al. 2006).

Reagent provided

Mouse monoclonal antibody from cell culture supernatant in buffer with carrier protein and preservative for stabilisation in the following formats:

Concentrate:	1 ml	(Cat. No. AIB-30175)
Concentrate:	0.5 ml	(Cat. No. AIB-30176)
Ready-to-use:	6 ml	(Cat. No. AIB-30174)

Dilution of primary antibody

Dilution of Nordic Biosite' concentrated antibody depends on the detection system used. The final working dilution must always be determined by the user. The elaboration of staining protocol should be done by an experienced specialist. For Nordic Bioste' recommendations see chapter 'Staining procedure'.

Explanations of the symbols on the product label:

REF	Catalog Number Bestellnummer Reference du catalogue	LOT	Batch Code Chargenbezeichnung Code du lot	Manufacturer Nordic BioSite AB Propellervägen 4A S-183 62 Täby Sweden Tel: +46 (0)8 5444 33 40 Fax: +46 (0)8 756 94 90 info@nordicbiosite.com www.nordicbiosite.com
	Use By Verwendbar bis Utiliser jusque	IVD	In Vitro Diagnostic Medical Device In vitro Diagnostikum Dispositif médical de diagnostic in vitro	
	Consult Instructions for use Gebrauchsanweisung beachten Consulter les instructions d'utilisation		Temperature Limitation Lagerungstemperatur Limites de température	

Storage and handling
The antibody should be stored at 2-8°C without furt her dilution. Dilutions of the concentrated antibody should be done with a suitable antibody dilution buffer (e.g. BCB-20005/BCB-20006 from Nordic Biosite). The diluted antibody should be stored at 2-8°C after use. Stability of this workin g solution depends on various parameters and has to be confirmed by appropriate controls. The antibody provided is suitable for use until the expiry date indicated on the label, if stored at 2-8°C. Do not use product after the expir y date. Positive and negative controls should be run simultaneously with all specimens. If unexpected staining is observed which cannot be explained by variations in laboratory procedures and a problem with the antibody is suspected, contact Nordic Biosite' technical support or your local distributor.

Precautions
Use through qualified personnel only.
Wear protective clothing to avoid contact of reagents and specimens with eye, skin and mucous membranes. If reagents or specimens come in contact with sensitive area, wash with large amounts of water.
Microbial contamination of the reagent must be avoided, since otherwise non-specific staining may occur.
Sodium azide (NaN_3), used for stabilisation, is not considered hazardous material in the concentration used.
Reaction of sodium azide with lead or copper in drainage pipes can result in the formation of highly explosive metallic azides.Sodium azide should be discarded in a large volume of running water to avoid formation of deposits.
Material safety data sheets (MSDS) are available upon request.

Staining procedure
Refer to the following table for conditions specifically recommended for this antibody. Also refer to detection system data sheets for guidance on specific staining protocols or other requirements.

Parameters	Nordic BioSites recommendations
*Pre-treatment	Heat Induced Epitope Retrieval (for example in Citrate Buffer pH 6.0 (BCB-20015/-20016)
*Control tissue	Lung tissue, adenocarcinoma of lung, thyroid gland
*Working dilution	1:200-1:500 (for concentrates)
*Incubation time	30-60 minutes

Quality control
The recommended positive control tissues for this antibody are thyroid glands, normal lung tissue and adenocarcinomas of the lung. We recommend carrying out a positive and a negative control with every staining run. Please refer to the instructions of the detection system for guidance on general quality control procedures.

Troubleshooting
If you observe unusual staining or other deviations from the expected results please read these instructions carefully, refer to the instructions of the detection system for relevant information or contact your local distributor.

Expected results
This antibody stains positive in nuclei of normal and pathologic tissue of thyroid glands and lung in formalin-fixed, paraffin-embedded tissue sections. Moreover, the antibody stains positive in the cytoplasm of hepatocytes (see chapter "Summary and Description"). Interpretation of the staining results is solely the responsibility of the user. Any experimental result should be confirmed by a medically established diagnostic procedure.

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Limitations of the Procedure

Immunohistochemistry is a complex technique involving both histological and immunological detection methods. Tissue processing and handling prior to immunostaining, for example variations in fixation and embedding or the inherent nature of the tissue can cause inconsistent results (Nadji and Morales, 1983). Endogenous peroxidase, alkaline phosphatase or biotin may cause non-specific staining depending on the detection system used. Tissues containing Hepatitis B Surface Antigen (HBsAg) may give false positive results with HRP (horse radish peroxidase) detection systems (Omata et al, 1980). Inadequate counterstaining and mounting can influence the interpretation of the results.

Nordic Biosite warrants that the product will meet all requirements described from its shipping date until the expiry date is reached, if the product is stored and utilised as recommended. No additional guarantees can be given. Under no circumstances shall Nordic Biosite be liable for any damages arising out of the use of the reagent provided.

Performance characteristics

Nordic Biosite has conducted studies to evaluate the performance of the antibody for use with a standard detection system. The product has been found to be sensitive and specific to the antigen of interest with minimal or no cross-reactivity except the described side-reaction with hepatocytes (see chapter “Summary and Description”).

Bibliography

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