

# Tissue-Tek Genie®

## anti-NKX3.1 Rabbit Monoclonal Antibody [EP356]

### Instructions for use

#### Intended use

For *in vitro* diagnostic use.

Tissue-Tek Genie® anti-NKX3.1 Rabbit Monoclonal Antibody [EP356] is designed to qualitatively detect human NKX3.1 protein in formalin-fixed, paraffin embedded (FFPE) specimen sections by immunohistochemistry (IHC) staining on the Tissue-Tek Genie® Advanced Staining System. The clinical interpretation must be made in conjunction with histological examination, relevant clinical information, other diagnostic tests and proper controls by a qualified pathologist.

#### Limitations

This product has been optimized for use with the default protocol for this antibody on the Tissue-Tek Genie Advanced Staining System, using Tissue-Tek Genie® reagents and FFPE specimen sections. Staining quality may diminish when used with other systems and/or reagents.

#### Summary and principle

NKX3.1 is an androgen-regulated tumor suppressor gene. NKX3.1 protein down regulate growth of epithelial cells in prostate tissue and plays a critical role in suppressing prostate carcinoma. NKX3.1 is expressed predominantly in prostate epithelium and is also found in testis, ureter, pulmonary bronchial mucous glands, salivary gland, and some cases of ductal and lobular breast carcinoma. NKX3.1 is a highly sensitive and specific marker for prostate adenocarcinoma. The anti-NKX3.1 antibody is useful for identifying neoplasm of

prostate origin when used with a panel of other antibodies. It is particularly useful in low differentiated tumors where PSA and/or Prostein (P501S) may be weakly expressed or lost.

The Tissue-Tek Genie anti-NKX3.1 Rabbit Monoclonal Antibody [EP356] is a primary antibody against human NKX3.1 protein and is provided in buffered saline containing 1% bovine serum albumin and 0.09% sodium azide. FFPE specimen sections are placed on positively charged slides and the paraffin is removed using the Tissue-Tek Genie® Dewax Solution (REF 8865-G001), after which heat-induced epitope retrieval is performed using the Tissue-Tek Genie® High pH Antigen Retrieval Solution (REF 8744-G001).

IHC demonstration of NKX3.1 protein in FFPE specimen sections is achieved through use of the Tissue-Tek Genie anti-NKX3.1 Rabbit Monoclonal Antibody [EP356] and the Tissue-Tek Genie® Pro Detection Kit, DAB (REF 8826-K250). This procedure entails the sequential application of antibody and kit components as follows:

- Tissue-Tek Genie® Protein Block
- Tissue-Tek Genie® anti-NKX3.1 Rabbit Monoclonal Antibody [EP356]
- Tissue-Tek Genie® Peroxidase Block
- Tissue-Tek Genie® Link (binds to the primary antibody)
- Tissue-Tek Genie® Polymer HRP-Conjugate (binds to the link)
- Tissue-Tek Genie® DAB Substrate (visualizes the detected protein)

Tissue-Tek Genie® Hematoxylin (REF 8830-M250) is then used to visualize the nuclei of cells. The IHC stained slide is cover-slipped and the FFPE specimen section reviewed using a light microscope.

## Expected results

Specificity and intended use of this antibody were validated by performing IHC staining on the Tissue-Tek Genie Advanced Staining System using FFPE normal and tumor specimen sections.

Nuclear staining is observed in luminal secretory epithelial cells and basal epithelial cells of prostate glands, dispersed spermatogonia in seminiferous tubules of testis, and epithelial cells of salivary gland. Nuclear staining is also observed in neoplastic cells of prostate adenocarcinomas. Positive staining is not observed in stromal cells, endothelial cells, and infiltrating lymphocytes of prostate. Positive staining is not observed in epithelial cells of appendix.

Sensitivity and identification of NKX3.1 protein by this antibody may be affected by improper specimen handling. This may alter antigenicity, weaken detection and may generate false negative results.

Cellular staining pattern: nuclear

Positive control tissue: prostate, testis

## Cautions and warnings

For professional use only. Take reasonable precautions when handling. Avoid contact of reagents with eyes, skin, and mucous membranes. Wear protective gloves, clothing, and eye/face protection.

Capsules filled with ready-to-use, pre-diluted, antibody are for single use only. Do not attempt to refill or add additional reagent. Discard capsule after use.

Cartridges filled with ready-to-use, pre-diluted, antibody are intended for multiple uses. Do not attempt to refill or add additional reagent. Discard cartridge when empty.

It is recommended to include appropriate controls on each specimen slide to help in identifying any deviation that might occur during the staining process.

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Refer to the SDS for further information.

## Storage conditions

Store this product at 2-8°C.

## Instructions for use

Tissue-Tek Genie® anti-NKX3.1 Rabbit Monoclonal Antibody [EP356], capsules (REF 8320-C010):

1. Place the Tissue-Tek Genie® Reagent Dispensing Area Tag (RDA-Tag) attached to the capsule into the RDA.
2. Push the capsule into the RDA with foil side down and click the attached RDA-Tag down into place on the RDA.
3. Place the RDA on the desired station of the Tissue-Tek Genie Advanced Staining System.
4. Place the slide with the specimen section on the same station, specimen section side down.
5. Assign protocol 8320 to the same station.
6. Initiate execution of protocol 8320.
7. The RDA-Tag 8320 will be scanned and registered automatically when the staining process is initiated.
8. During the primary antibody application step, the antibody will be released from the capsule into the RDA and onto the specimen section on the slide.
9. The staining protocol continues to the end.

Tissue-Tek Genie® anti-NKX3.1 Rabbit Monoclonal Antibody [EP356], cartridge (REF 8320-M250):

1. Prior to placing the cartridge on the carousel of the Tissue-Tek Genie Advanced Staining System, prime the cartridge by facing the nozzle downwards and gently pinching the nozzle tubing until the tubing is filled with the reagent.
2. Place the cartridge on the carousel.
3. Click the RDA-Tag 8320 into place on the RDA.
4. Place the RDA on the desired station of the Tissue-Tek Genie Advanced Staining System.
5. Place the slide with the specimen section on the same station, specimen section side down.
6. Assign protocol 8320 to the same station.
7. Initiate execution of protocol 8320.



8. The RDA-Tag 8320 and the cartridge will be scanned and registered automatically when the staining process is initiated.
9. During the primary antibody application step, the antibody will be dispensed from the cartridge into the RDA and onto the specimen section on the slide.
10. The staining protocol continues to the end.

#### Material required but not supplied

The following reagents may be required for staining but are not provided:

- Tissue-Tek Genie® Dewax Solution (REF 8865-G001)
- Tissue-Tek Genie® Wash Solution (REF 8874-G004)
- Tissue-Tek Genie® High pH Antigen Retrieval Solution (REF 8744-G001)
- Tissue-Tek Genie® Non-Immune Rabbit Ig Antibody, Negative Control (REF 8605-C010, 8605-M250)
- Tissue-Tek Genie® *Pro* Detection Kit, DAB (REF 8826-K250)
- Tissue-Tek Genie® Hematoxylin (REF 8830-M250)

Further information can be found on the Sakura Finetek USA website at [www.sakuraus.com/Genie](http://www.sakuraus.com/Genie)

## Order information

#### Product code, product name and quantity

REF 8320-C010 Tissue-Tek Genie® anti-NKX3.1 Rabbit Monoclonal Antibody [EP356], Ready-To-Use, 10 capsules; 1 pack.

REF 8320-M250 Tissue-Tek Genie® anti-NKX3.1 Rabbit Monoclonal Antibody [EP356], Ready-To-Use, 250 tests, 1 cartridge; 1 unit.

**NOTE:** The Safety Data Sheet (SDS) is available online on the Sakura Finetek USA website at [www.sakuraus.com/SDS.html](http://www.sakuraus.com/SDS.html)

## References

1. Gurel B, et al. Am J Surg Pathol. 2010; 34:1097-1105
2. Gelmann EP, et al. Prostate. 2003; 55:111-117
3. Bowen Cai, et al. Cancer Research. 2000; 60:6111-6115
4. Oh WJ, et al. J Pathology and Translational Medicine. 2016; 50:345-354
5. Asch-Kendrick RJ, et al. J Clin Pathol. 2014; 67:768-771

## Contact

If located within the United States, contact Sakura Finetek USA, Inc. by calling toll free **1-800-725-8723** or contact your Sakura Finetek representative or authorized distributor.

In countries, other than the United States, contact the nearest authorized Sakura Finetek instrument distributor or representative. Contact details may be found at [www.sakura.com](http://www.sakura.com)

## Symbols

	Catalog number
	Batch code
	<i>in vitro</i> diagnostic medical device
	Temperature limitation
	Use by
	Manufacturer
	Consult instructions for use
	European Conformity
	Authorized representative in the European Community

Storage: 2°C  8°C







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