

# Product Datasheet

## Sirtuin 1/SIRT1 Antibody (E104)

### NB110-57573

Unit Size: 0.1 ml

Store at -20C. Avoid freeze-thaw cycles.

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**NB110-57573**

Sirtuin 1/SIRT1 Antibody (E104)

Product Information	
Unit Size	0.1 ml
Concentration	Please see the vial label for concentration. If unlisted please contact technical services.
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	E104
Preservative	0.01% Sodium Azide
Isotype	IgG
Purity	Protein A or G purified
Buffer	49% PBS, 0.05% BSA and 50% Glycerol
Target Molecular Weight	110 kDa
Product Description	
Host	Rabbit
Gene ID	23411
Gene Symbol	SIRT1
Species	Human, Rat (Negative)
Specificity/Sensitivity	The antibody does not cross-react with other sirtuin family members.
Immunogen	A synthetic peptide corresponding to residues in C-terminus of human Sir2/SIRT1 was used as immunogen.
Notes	Produced using Abcam's RabMab® technology. RabMab® technology is covered by the following U.S. Patents, No. 5,675,063 and/or 7,429,487.
Product Application Details	
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation
Recommended Dilutions	Western Blot 1:1000-10000, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence 1:100-250, Immunoprecipitation 1:50, Immunohistochemistry-Paraffin 1:100-250, Immunohistochemistry-Frozen 1:10-1:500
Application Notes	In Western blot this antibody detects a band at approximately 110 kDa. Use in IHC-F was reported in the scientific literature (PMID: 21098725).



## Publications

Bhalla K, Jaber S, Reagan K et al. SIRT3, a metabolic target linked to ataxia-telangiectasia mutated (ATM) gene deficiency in diffuse large B-cell lymphoma Scientific reports 2020-12-03 [PMID: 33273545] (IF/IHC, Human)

### Details:

Several cancerous tissues and cells underwent immunohistochemical analysis.

Uno A, Hitosugi M, Nakamura M et al. Complement C9 expression is associated with damaged myocardial cells in pediatric sudden death cases of fulminant myocarditis Egypt J Forensic Sci 2020-12-01 (IHC-P, Human)

### Details:

Human heart samples were analyzed by immunohistochemistry.

Jin SH, Yang JH, Shin BY et al. Resveratrol inhibits LXRA $\alpha$ -dependent hepatic lipogenesis through novel antioxidant Sestrin2 gene induction. Toxicol Appl Pharmacol 2013-05-04 [PMID: 23651738] (WB, Human)

Firestein R, Blander G, Michan S et al. The SIRT1 deacetylase suppresses intestinal tumorigenesis and colon cancer growth. PLoS One 2008-04-01 [PMID: 18414679] (IF/IHC, ICC/IF)

Sung JY, Kim R, Kim JE et al. Balance between SIRT1 and DBC1 expression is lost in breast cancer. Cancer Sci. 2010-07-01 [PMID: 20412117]

Gracia-Sancho J, Villarreal G Jr, Zhang Y et al. Activation of SIRT1 by resveratrol induces KLF2 expression conferring an endothelial vasoprotective phenotype. Cardiovasc Res. 2010-02-01 [PMID: 19815564]



## Procedures



**Immunohistochemistry Protocol for SIRT1 Antibody (NB110-57573)****Immunohistochemistry Protocol for Paraffin-embedded Tissues****1. Solutions and reagents****1.1. Xylene****1.2. Ethanol, anhydrous denatured, histological grade (100%, 95%, 70%)****1.3. Washing buffer:**

TBST washing buffer: 1XTBS/0.1% Tween-20

To prepare stock solution of 10X TBS: add 24.2 g Trizma base and 80 g sodium chloride to 1L of dH<sub>2</sub>O. Adjust pH to 7.6.

Working solution. 1XTBST/0.1% Tween-20: add 100ml 10XTBS to 900 ml dH<sub>2</sub>O. Add 1 ml Tween-20 and mix well.

**1.4. Distilled water (dH<sub>2</sub>O)****1.5. Antigen Retrieval Solution:**

0.01M Sodium Citrate Buffer, pH 6.0

To prepare stock solutions:

Solution A. 0.1 M citric acid solution: dissolve 21.0 g of citric acid, monohydrate (C<sub>6</sub>H<sub>8</sub>O<sub>7</sub>·H<sub>2</sub>O) in 1 liter of dH<sub>2</sub>O.

Solution B. 0.1M sodium citrate solution: dissolve 29.4 g trisodium citrate dihydrate (C<sub>6</sub>H<sub>5</sub>Na<sub>3</sub>O<sub>7</sub>·2H<sub>2</sub>O) in 1 liter of dH<sub>2</sub>O.

Working solution: Add 9 ml of Stock solution A and 41 ml of stock solution B to 450 ml of dH<sub>2</sub>O. Adjust pH to 6.0.

**1.6. 3% Hydrogene Peroxide****1.7. Blocking buffer:**

PBS (Dulbeccos Phosphate Buffered Salts, 1X, catalog #21-031-CV from Mediatech, Inc.) + 10% serum (serum origin depends on the host of the secondary antibody)

**1.8. Hematoxylin QS (catalog #H-3404 from Vector Laboratories, Inc.)****1.9. Permanent Mounting medium (VectaMount, catalog# H-5000 Vector Laboratories, Inc.)****2. Protocol****2.1. Deparaffinization/Rehydration****2.1.1. Heat slides in an oven at 65C for 1 hour.**

2.1.2. De-paraffinize/hydrate using the following series of washes: two Xylene washes (5 min each), followed by two 100% ethanol rinses (5 min each), followed by 95% ethanol, 70% ethanol, 50% ethanol, 30% ethanol, followed by H<sub>2</sub>O and a TBST wash for 5 min on a shaker.

**2.2. Antigen Retrieval****2.2.1. Immerse slides into staining dish containing Antigen Retrieval Solution.****2.2.2. Place covered staining dish into the rice cooker. Add 120 ml of dH<sub>2</sub>O.**

2.2.3. When cook is turned to warm (about 20 to 30 min), unplug the cooker and remove the staining dish to the bench top.

2.2.4. Allow to cool down, without cover, for 20 min.

**2.3. Staining****2.3.1. Wash slides with TBST for 5 min on a shaker.****2.3.2. Inactivate endogenous peroxidase by covering tissue with 3% hydrogen peroxide for 10 min.****2.3.3. Wash slides three times with TBST (3 min each on a shaker).****2.3.4. Block slides with the blocking solution for 1 hour.****2.3.5. Dilute primary antibody in the blocking buffer per recommendation on the data sheet.****2.3.6. Apply primary antibody to each section and incubate overnight in the humidified chamber (4C).****2.3.7. Wash slides three times with TBST (3 min each on a shaker).**

2.3.8. Apply to each section secondary HRP-conjugated anti-rabbit antibody diluted in the blocking solution per manufacturers recommendation; incubate for 1 hour at room temperature.

**2.3.9. Wash slides three times with TBST (3 min each on a shaker).****2.3.10. Add freshly prepared DAB substrate to the sections.**

2.3.11. Incubate tissue sections with the substrate at room temperature until suitable staining develops (generally 2 to 5 min).

**2.3.12. Rinse sections with water.****2.3.13. Counterstain with Hematoxylin.****2.3.14. Rinse sections with water.**

2.3.15. Dehydrate samples using two rinses with 100% Ethanol (20 dips per rinse) followed by two rinses with Xylene (30 dips per rinse).

2.3.16. Mount coverslips on slides using Permount medium.





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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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