Product Datasheet

Survivin Antibody
NB500-201

Unit Size: 0.1 ml

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

Reviews: 20  Publications: 311

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
www.novusbio.com/NB500-201

Updated 2/20/2019 v.20.1

Earn rewards for product reviews and publications.
Submit a publication at www.novusbio.com/publications
Submit a review at www.novusbio.com/reviews/destination/NB500-201
## NB500-201
Survivin Antibody

### Product Information

<table>
<thead>
<tr>
<th><strong>Unit Size</strong></th>
<th>0.1 ml</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Concentration</strong></td>
<td>1 mg/ml</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>Aliquot and store at -20°C or -80°C. Avoid freeze-thaw cycles.</td>
</tr>
<tr>
<td><strong>Clonality</strong></td>
<td>Polyclonal</td>
</tr>
<tr>
<td><strong>Preservative</strong></td>
<td>0.02% Sodium Azide</td>
</tr>
<tr>
<td><strong>Isotype</strong></td>
<td>IgG</td>
</tr>
<tr>
<td><strong>Purity</strong></td>
<td>Immunogen affinity purified</td>
</tr>
<tr>
<td><strong>Buffer</strong></td>
<td>PBS</td>
</tr>
<tr>
<td><strong>Target Molecular Weight</strong></td>
<td>16.5 kDa</td>
</tr>
</tbody>
</table>

### Product Description

| **Host** | Rabbit |
| **Gene ID** | 332 |
| **Gene Symbol** | BIRC5 |
| **Species** | Human, Mouse, Rat, Canine, Feline, Guinea Pig, Hamster |
| **Immunogen** | Full length recombinant human Survivin [UniProt# O15392] |

### Product Application Details

| **Applications** | Western Blot, Simple Western, Chromatin Immunoprecipitation, ELISA, Flow Cytometry, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation |
| **Application Notes** | This Survivin antibody is useful for Chromatin Immunoprecipitation, Immunocytochemistry/Immunofluorescence, Immunohistochemistry on paraffin-embedded sections, Immunoprecipitation and Western Blot. In WB, a band at approx. 16.5 kDa can be seen. For IHC, prior antigen retrieval (pressure cooking) is recommended for cytoplasmic and nuclear detection of Survivin. Immunohistochemistry-Frozen and Flow Cytometry were reported in scientific literature. In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. Separated by Size-Wes, Sally Sue/Peggy Sue. The observed molecular weight of the protein may vary from the listed predicted molecular weight due to post translational modifications, post translation cleavages, relative charges, and other experimental factors. |
Immunocytochemistry/Immunofluorescence: Survivin Antibody [NB500-201] - Analysis using the HRP conjugate of NB500-201. Staining of Telophase with accumulation of survivin in the midbodies of two daughter cells. Survivin detection using NB500-201.

Western Blot: Survivin Antibody [NB500-201] - Analysis of 30ug of HeLa whole cell lysate (NB800-PC1) using rabbit polyclonal Survivin antibody (NB 500-201) at 1ug/ml. Detection was performed using ECL method with 1 minute exposure.

Immunocytochemistry/Immunofluorescence: Survivin Antibody [NB500-201] - Analysis of HeLa cells using Survivin antibody (NB500-201, 1:10). An Alexa Fluor 488-conjugated Goat to rabbit IgG was used as secondary antibody (green). Actin filaments were labeled with Alexa Fluor 568 phalloidin (red). DAPI was used to stain the cell nuclei (blue).

Western Blot: Survivin Antibody [NB500-201] - Whole cell extracts were prepared in RIPA buffer and analyzed using immunoblot analysis. PVDF membrane. Primary antibody 1:1000 at 4C overnight. Secondary antibody 1:20000 at 4C for 1 hour. This image was submitted via customer Review.

Immunohistochemistry-Paraffin: Survivin Antibody [NB500-201] - Survivin shows lysates of human neuroblastoma cell line. PVDF membrane was probed with 1:200 dilution of 0.5 ug/mL of rabbit anti-Survivin polyclonal (NB500-201, Novus Biologicals), followed by 1:2000 dilution of goat anti-rabbit IgG.

Flow Cytometry: Survivin Antibody [NB500-201] - An intracellular stain was performed on HeLa cells with Survivin Antibody NB500-201 and a matched isotype control. Cells were fixed with 4% PFA and then permeablized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature, followed by Rabbit IgG (H+L) Cross-Adsorbed Secondary Antibody, Dylight 550 (SA5-10033, Thermo Fisher).

Western Blot: Survivin Antibody [NB500-201] - Analysis of Survivin in human hepatocytes from cancer patient (left) and HeLa cell lysate (right) using Survivin antibody. Image from verified customer review.
Western Blot: Survivin Antibody [NB500-201] - Analysis of Survivin in HeLa cell lysate. Image courtesy of anonymous customer review.

Western Blot: Survivin Antibody [NB500-201] - Analysis shows lysates of human neuroblastoma cell line. PVDF membrane was probed with 1:200 dilution of 0.5 ug/mL of rabbit anti-Survivin polyclonal (NB500-201, Novus Biologicals), followed by 1:2000 dilution of goat anti-rabbit IgG.


Immunohistochemistry: Survivin Antibody [NB500-201] - HRP conjugated Survivin expression in BIRC5 transfected 293T cells. Image from verified customer review.
Immunohistochemistry: Survivin Antibody [NB500-201] - The top photo is a no primary antibody control stain and the bottom photo is anti-survivin staining of melanoma. Photo courtesy of Dr. Dario Altieri, Yale University.

Simple Western: Survivin Antibody [NB500-201] - Lane view shows a specific band for Survivin in 1.0 mg/ml of HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Journal</th>
<th>Publication Date</th>
<th>PMID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humphry NJ, Wheatley SP.</td>
<td>Survivin inhibits excessive autophagy in cancer cells but does so independently of its interaction with LC3.</td>
<td>Biol Open.</td>
<td>Oct 22 2018 12:00AM</td>
<td>30348810</td>
</tr>
<tr>
<td>Gock M, Mullins CS, Harnack C et al.</td>
<td>Establishment, functional and genetic characterization of a colon derived large cell neuroendocrine carcinoma cell line.</td>
<td>World J. Gastroenterol.</td>
<td>Sep 7 2018 12:00AM</td>
<td>30197480</td>
</tr>
<tr>
<td>Novais-Cruz M, Alba Abad M, van IJcken WF et al.</td>
<td>Mitotic progression, arrest, exit or death relies on centromere structural integrity, rather than de novo transcription.</td>
<td>Elife</td>
<td>Aug 6 2018 12:00AM</td>
<td>30080136</td>
</tr>
<tr>
<td>Wu Xin, Yamamoto Hirofumi, Nakanishi Hiroyuki et al.</td>
<td>Innovative delivery of siRNA to solid tumors by super carbonate apatite.</td>
<td>PLoS One</td>
<td>2015</td>
<td>25738937</td>
</tr>
<tr>
<td>Nonagase Yoshikane, Yonesaka Kimio, Kawakami Hisato et al.</td>
<td>Heregulin-expressing HER2-positive breast and gastric cancer exhibited heterogeneous susceptibility to the anti-HER2 agents lapatinib, trastuzumab and T-DM1.</td>
<td>Oncotarget</td>
<td>2016</td>
<td>27768588</td>
</tr>
<tr>
<td>Scuto Anna, Kujawski Maciej, Kowolik Claudia et al.</td>
<td>STAT3 inhibition is a therapeutic stRategy for ABC-like diffuse large B-cell lymphoma.</td>
<td>Cancer Research</td>
<td>2011</td>
<td>21521803</td>
</tr>
</tbody>
</table>

More publications at [http://www.novusbio.com/NB500-201](http://www.novusbio.com/NB500-201)
Procedures

Western Blot Protocol Specific for Survivin Antibody (NB500-201)

Western Blot Procedure
1) Cells were pelleted, washed in 1XPBS, suspended in ice water (~ 5 x 10(6) cells/ml), and placed on ice
2) Lysates were prepared with the addition of 2X lysis buffer [2% SDS/ 50mM Tris-HCl / 10% glycerol]
3) Lysates were heated to 95 degrees C for 3 minutes and then microfuged at room temperature for 10 minutes
4) 50 ug of lysate were electrophoresed (150 V) through a 4-15% PAGE
5) Proteins were transferred (60 V) onto an Immobilon-P membrane (Millipore Corp.) for 45 minutes
6) The blot was blocked overnight at 4 degrees C in blocking buffer [1XPBS, pH 7 / 5% nonfat milk / 0.1% Tween-20]
7) Washed the blot in 1XPBS / 0.1% Tween-20
8) Incubated the blot with 1 ug/ml of (NB500-201) anti-Survivin antibody, diluted in blocking buffer, for 2 hours at room temperature
9) Washed the blot in 1XPBS / 0.1% Tween-20
10) Reacted the blot with HRP-conjugated donkey anti-rabbit Ig, diluted in 1XPBS / 0.1% Tween-20, for 30 minutes at room temperature
11) Washed the blot in 1XPBS / 0.1% Tween-20
12) Visualized blot by ECL and autoradiography

NOTE: HeLa whole cell extracts (NB800-PC1) were used as a positive control for this antibody.
Immunohistochemistry-Paraffin Protocol Specific for Survivin Antibody (NB500-201)

Materials

1) 1 Phosphate buffered saline (pH 7.6): NaCl 137mmol/L, KCl 2.7mmol/L, Na2HPO4 4.3mmol/L, KH2PO4 1.4 mmol/L
2) Citrate buffer, 0.01 M, pH6.0, Sodium Citrate 3g, Citric acid 0.4g
3) 3% Hydrogen peroxide
4) Primary antibody
5) Blocking serum (normal serum)
6) Biotinylated secondary antibody
7) DAB staining kit

Methods

1. Dewax and hydration of slides using xylene and EtOH:
   Dry slides for 20 min in a 60 C oven
   Add Xylene, 2 x 10 min
   100%, 95%, 80%, and 70% EtOH, 5 min each EtOH concentration
   Rinse in PBS, 5'

2 Antigen retrieval method (only for paraffin slides)
1a. High-pressure antigen retrieval procedure (recommended method)
   Place slides in a glass slide holder (ensure that the slide holder is completely filled with slides, slides without sections
   if necessary, to ensure even heating. The entire slide holder is immersed in 1000 ml of Citrate buffer (0.01M, pH6.0)
   within a pressure cooker
   Once steam is produced, and ONLY when steam is visible, from the pressure cooker (usually 15-20 min), the
   required high-pressure will have been reached, and slides will be incubated for 2 min.
   Turn off heat, and allow buffer and slides to cool to room temperature
   Slides are then rinsed in PBS for 5 minutes
2.  Add 3% hydrogen peroxide solution, 10'at RT, then PBS, 3X5'
3.  Normal blocking serum, 20'at RT
4.  Incubate with Primary Ab, 4C overnight or 1.5 hours at 37C
5.  Rinse with PBS, 3 X 5' each rinse
6.  Add Biotin-conjugated second antibody, 10'at RT
7.  Rinse with PBS, 3 X 5' each rinse
8.  Add Streptavidin-Peroxidase, 10'at RT
9.  Rinse with PBS, 3 X 5' each rinse
10. Staining with DAB solution, 2-5'under microscope
11. Stop the reaction by washing in tap water
12. Counterstain in Haematoxylin for 3-5 minutes
13. 75%, 80%, 95% and 100% ethanol, 5x2', xylene 2 x 10'

Immunoprecipitation Protocol Specific for Survivin Antibody (NB500-201)

Immunoprecipitation Procedure
1) Lyse cells plated in a 60mm dish:
   a) 300 ul CHAPS buffer [50mM Tris-HCl, pH 7.5/50mM NaCl/1mM EDTA/1% NP-40/0.1% CHAPS/1mM NaVO4/1mM
   PMSF]
   b) Rock for 20 minutes at 4 degrees C
2) Harvest lysate and spin down the insoluble material at 14K rpm
3) Collect soluble fraction
4) Pre-clear lysate with 40 ul of 50:50 slurry of Protein A beads, rocking for 1 hour at 4 degrees C
5) Spin down beads at 2K rpm, at 4 degrees C
6) Collect pre-cleared lysate
7) Incubate lysate with 5-7ug of anti-Survivin (NB 500-201) overnight, rocking at 4 degrees C
8) Add 50 ul of Protein A 50:50 slurry for 2 hours, rocking at 4C
9) Wash beads with 200 ul of CHAPS buffer, three times
10) Denature immune complex by adding 2x Sample Buffer, containing 2-ME
11) Boil for 10 minutes and load onto an SDS-gel.
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.

For more information on our 100% guarantee, please visit www.novusbio.com/guarantee

Earn gift cards/discounts by submitting a review: www.novusbio.com/reviews/submit/NB500-201

Earn gift cards/discounts by submitting a publication using this product: www.novusbio.com/publications