Product Datasheet

TRF-2 Antibody - BSA Free

NB110-57130

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

Reviews: 2  Publications: 115

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Updated 8/8/2023 v.20.1

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# NB110-57130
TRF-2 Antibody - BSA Free

## Product Information

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Size</td>
<td>0.1 ml</td>
</tr>
<tr>
<td>Concentration</td>
<td>1.0 mg/ml</td>
</tr>
<tr>
<td>Storage</td>
<td>Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.</td>
</tr>
<tr>
<td>Clonality</td>
<td>Polyclonal</td>
</tr>
<tr>
<td>Preservative</td>
<td>0.02% Sodium Azide</td>
</tr>
<tr>
<td>Isotype</td>
<td>IgG</td>
</tr>
<tr>
<td>Purity</td>
<td>Immunogen affinity purified</td>
</tr>
<tr>
<td>Buffer</td>
<td>PBS</td>
</tr>
<tr>
<td>Target Molecular Weight</td>
<td>59.6 kDa</td>
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## Product Description

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Host</td>
<td>Rabbit</td>
</tr>
<tr>
<td>Gene ID</td>
<td>7014</td>
</tr>
<tr>
<td>Gene Symbol</td>
<td>TERF2</td>
</tr>
<tr>
<td>Species</td>
<td>Human, Mouse, Rat, Chinese Hamster, Primate</td>
</tr>
<tr>
<td>Marker</td>
<td>Telomeres marker</td>
</tr>
<tr>
<td>Immunogen</td>
<td>This TRF-2 Antibody was developed against Baculovirus purified TRF2 protein.</td>
</tr>
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</table>

## Product Application Details

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Applications</td>
<td>Western Blot, Simple Western, Dot Blot, ELISA, Flow Cytometry, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunoprecipitation, Chromatin Immunoprecipitation (ChIP), Knockdown Validated</td>
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<tr>
<td>Recommended Dilutions</td>
<td>Western Blot 1:2000 - 1:5000, Simple Western 1:25, Flow Cytometry 1-5 ug/ml, ELISA, Immunohistochemistry 1:200, Immunocytochemistry/Immunofluorescence 1:50 - 1:200, Immunoprecipitation, Immunohistochemistry-Paraffin 1:200, Dot Blot, Chromatin Immunoprecipitation (ChIP) 1:10-1:500, Knockdown Validated</td>
</tr>
</tbody>
</table>
Application Notes

This TRF2 antibody is useful for ChIP, Immunocytochemistry/Immunofluorescence, Immunohistochemistry paraffin embedded sections and Western blot, where a band at approx. 56 kDa is seen. Immunoprecipitation was reported in scientific literature. Use in Knockdown Validated, and Dot blot reported in scientific literature (PMID: 31026066). Use in ELISA reported in scientific literature (PMID: 31575660). In ICC/IF, nuclear staining was observed in HeLa cells. In IHC, nuclear staining was observed in xenografted human breast cancer tissue.

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. Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended.

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.

Images

Immunocytochemistry/Immunofluorescence: TRF-2 Antibody [NB110-57130] - HeLa cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X TBS + 0.5% Triton X-100. The cells were incubated with antibody at a 1:200 dilution overnight at 4 degrees Celsius and detected with DyLight 488 (Green) at a 1:500 dilution. Alpha tubulin was used as a co-stain at a 1:1000 dilution and detected with Dylight 550 (Red). Nuclei were detected with DAPI (Blue) at 2.0 ug/ml in 1X PBS. Cells were imaged using a 40X objective.

Simple Western: TRF-2 Antibody [NB110-57130] - Lane view shows a specific band for TRF2 in 1.0 mg/mL of HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.
Western Blot: TRF-2 Antibody [NB110-57130] - Analysis of HeLa whole cell lysate (A), HeLa nuclear cell lysate (B), k562 cell lysate (C), HepG2 cell lysate (D), NIH/3T3 cell lysate (E), CHO cell lysate (F), PC12 cell lysate (G), and Cos7 cell lysate (H) using antibody at a concentration of 2 ug/mL.


Immunohistochemistry-Paraffin: TRF-2 Antibody [NB110-57130] - Analysis of FFPE human breast cancer tissue with rabbit polyclonal TRF2 antibody at a dilution of 1:200. The staining was developed with HRP-DAB detection method and the counterstaining was performed using hematoxylin. This TRF2 antibody generated an expected nuclear signal in all the cancer cells and the stromal cells. In the tested section, only a subset of myoepithelial cells showed positivity for this protein.

Immunocytochemistry/Immunofluorescence: TRF-2 Antibody [NB110-57130] - NIH3T3 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.5% Triton X-100 in PBS for 5 minutes. The cells were incubated with anti-TRF-2 Antibody NB110-57130 at 2 ug/ml overnight at 4C and detected with an anti-rabbit Dylight 488 (Green) at a 1:1000 dilution for 60 minutes. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.
Flow Cytometry: TRF-2 Antibody [NB110-57130] - An intracellular stain was performed on HeLa cells with TRF-2 Antibody NB110-57130 (blue) and a matched isotype control NBP2-24891 (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 1.0 ug/mL for 30 minutes at room temperature, followed by Rabbit IgG (H+L) Cross-Adsorbed Secondary Antibody, Dylight 550 (SA5-10033, Thermo Fisher).


Immunocytochemistry/Immunofluorescence: TRF-2 Antibody [NB110-57130] - RNAi-mediated depletion of human separase (ESPL1) induces TIFs. Control scrambled siRNA- (control) and ESPL1 siRNA-treated fibroblasts stained with anti-p53-binding protein 1 (53BP1; green) and anti-TRF2 (red). It is noteworthy that in ESPL1 siRNA-treated cells, 53BP1 signals frequently overlap with TRF2 signals marking the TIFs. Scale bar, 5 um. Image collected and cropped by CiteAb from the following publication (http://www.nature.com/doifinder/10.1038/ncomms10405), licensed under a CC-BY license.

Immunohistochemistry-Paraffin: TRF-2 Antibody [NB110-57130] - Analysis of FFPE human breast cancer tissue with rabbit polyclonal TRF2 antibody at 1:200 dilution. The staining was developed with HRP-DAB detection method and the counterstaining was performed using hematoxylin. This TRF2 antibody generated an expected nuclear signal in all the cancer cells and the stromal cells. In the tested section, only a subset of myoepithelial cells showed positivity for this protein.
Flow Cytometry: TRF-2 Antibody [NB110-57130] - An intracellular stain was performed on HeLa cells with TRF-2 Antibody NB110-57130AF488 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 488.

Publications

Fleury H, MacEachern MK, Stiefel CM et al. The APE2 nuclease is essential for DNA double-strand break repair by microhomology-mediated end joining Molecular cell 2023-04-05 [PMID: 37044098] (WB, Human)


Details:
Dilution used in ICC/IF 1:1000


Guh CY, Shen HJ, Chen LW et al. XPF activates break-induced telomere synthesis Nature communications 2022-10-02 [PMID: 36184605] (FISH)

Details:
Dilution used in 1:200


Kaminski N, Wondisford AR, Kwon Y et al. RAD51AP1 regulates ALT-HDR through chromatin-directed homeostasis of TERRA Molecular cell 2022-10-14 [PMID: 36265488]

Yadav T, Zhang JM, Ouyang J et al. TERRA and RAD51AP1 promote alternative lengthening of telomeres through an R- to D-loop switch Molecular cell 2022-10-11 [PMID: 36265486] (ICC/IF, PLA, Human)

Jack A Phase Separation as a Model of Nucleoprotein Organization Thesis 2022-01-01 (WB, Human)

Details:
Dilution used for WB 1:2000


More publications at http://www.novusbio.com/NB110-57130
**Procedures**

**Western Blot protocol for TRF2 Antibody (NB110-57130)**

1. Perform SDS-PAGE on samples to be analyzed, loading 40 ug of total protein per lane.
2. Transfer proteins to membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain according to standard Ponceau S procedure (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot.
5. Block the membrane using standard blocking buffer for at least 1 hour.
6. Wash the membrane in wash buffer three times for 10 minutes each.
7. Dilute primary antibody in blocking buffer and incubate 1 hour at room temperature.
8. Wash the membrane in wash buffer three times for 10 minutes each.
9. Apply the diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer three times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturers instructions.

*Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%.

*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.*

**Immunocytochemistry/Immunofluorescence Protocol for TRF2 Antibody (NB110-57130)**

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and wash the cells briefly in PBS. Add 10% formalin to the dish and fix at room temperature for 10 minutes.
2. Remove the formalin and wash the cells in PBS.
3. Permeabilize the cells with 0.1% Triton X100 or other suitable detergent for 10 min.
4. Remove the permeabilization buffer and wash three times for 10 minutes each in PBS. Be sure to not let the specimen dry out.
5. To block nonspecific antibody binding, incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
6. Add primary antibody at appropriate dilution and incubate overnight at 4C.
7. Remove primary antibody and replace with PBS. Wash three times for 10 minutes each.
8. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
9. Remove secondary antibody and replace with PBS. Wash three times for 10 minutes each.
10. Counter stain DNA with DAPI if required.

*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.*
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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<tbody>
<tr>
<td>NB800-PC1</td>
<td>HeLa Whole Cell Lysate</td>
</tr>
<tr>
<td>HAF008</td>
<td>Goat anti-Rabbit IgG Secondary Antibody [HRP]</td>
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<tr>
<td>NB7156</td>
<td>Goat anti-Rabbit IgG (H+L) Secondary Antibody</td>
</tr>
<tr>
<td>NBP2-24891</td>
<td>Rabbit IgG Isotype Control</td>
</tr>
</tbody>
</table>

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