Product Datasheet

POT1 Antibody - BSA Free
NB500-176

Unit Size: 0.1 ml

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

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Updated 9/9/2025 v.20.1

NB500-176

POT1 Antibody - BSA Free

Product Information

Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS
Target Molecular Weight	71.4 kDa

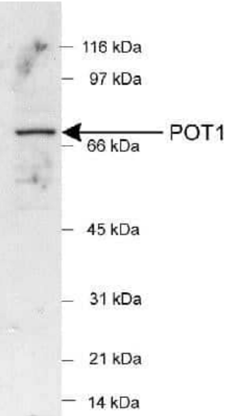
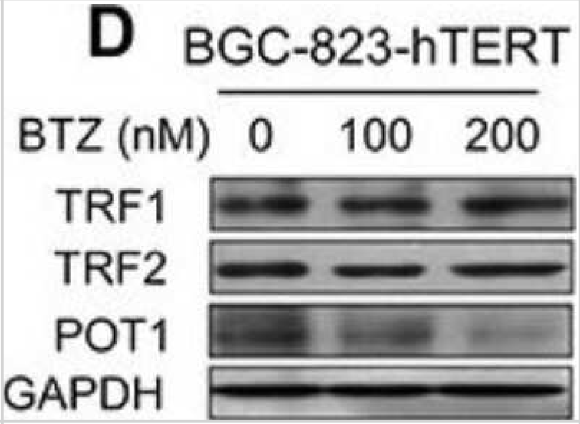
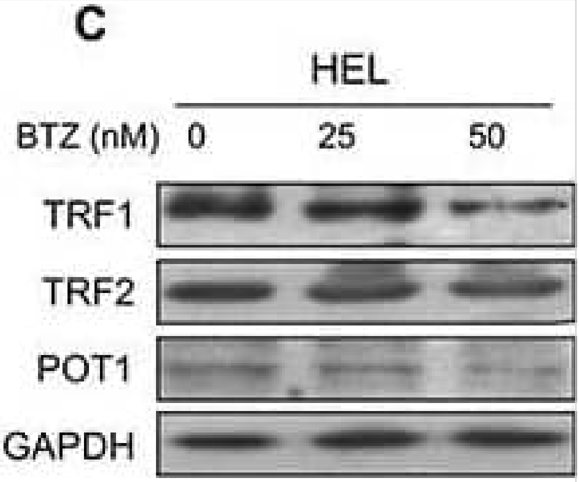
Product Description

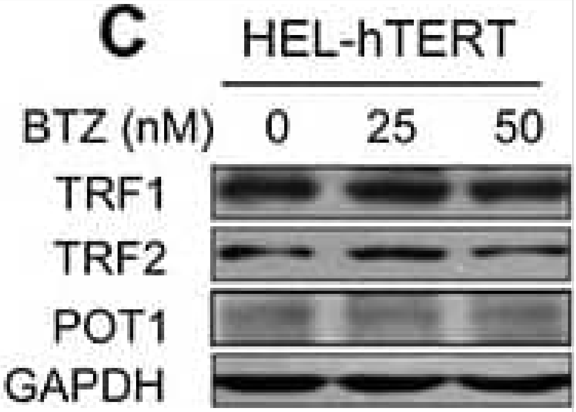
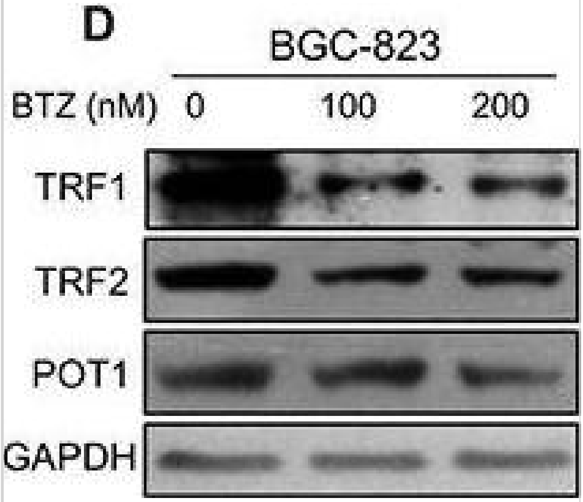
Description	Novus Biologicals Rabbit POT1 Antibody - BSA Free (NB500-176) is a polyclonal antibody validated for use in WB. Anti-POT1 Antibody: Cited in 18 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	25913
Gene Symbol	POT1
Species	Human
Reactivity Notes	Immunogen displays the following percentage of sequence identity for non-tested species: monkey (95%), rat (82%), and mouse (72%).
Immunogen	A synthetic peptide made to an internal portion of the human POT1 protein sequence (between residues 200-300). [UniProt# Q9NUX5]

Product Application Details

Applications	Western Blot
Recommended Dilutions	Western Blot 1 - 2 ug/ml
Application Notes	This POT1 antibody is use for Western blot, where a band at ~71.4 kDa is seen. Not recommended for ICC/IF. Nitrocellulose membranes may be necessary for optimal results, although this has not been completely determined. 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

Western Blot: POT1 Antibody [NB500-176] - Detection of POT1 in HeLa nuclear extracts (25 ug) using NB500-176(1:500). ECL detection 1 min.	
Western Blot: POT1 Antibody [NB500-176] - Immunoblotting assessment of TRF1, TRF2 and POT1 protein expression in bortezomib-treated cells. Same sets of cells above were analyzed for TRF1, TRF2 and POT1 protein levels and shown was representative of three independent experiments. BGC-823-hTERT cells. Image collected and cropped by Citeab from the following publication (Bortezomib-mediated down-regulation of telomerase and disruption of telomere homeostasis contributes to apoptosis of malignant cells. Oncotarget (2015) licensed under a CC-BY license.	
Widespread dysregulation of shelterin protein expression in bortezomib-treated HEL & BGC-823 cellsA. & B. mRNA levels of shelterin factors TRF1, TRF2, TPP1, POT1, RAP1 & TIN2 in bortezomib-treated cells. Cells were treated with bortezomib for 24 hours & qPCR was used for quantitative assays. The levels of each target mRNA in bortezomib-treated cells were expressed as percentages of those in untreated cells. (A) HEL cells & (B) BGC-823 cells. C. & D. Immunoblotting assessment of TRF1, TRF2 & POT1 protein expression in bortezomib-treated cells. Same sets of cells above were analyzed for TRF1, TRF2 & POT1 protein levels & shown was representative of three independent experiments. (C) HEL cells & (D) BGC-823 cells. * & **: P < 0.05 & 0.01, respectively. BTZ, bortezomib. Image collected & cropped by CiteAb from the following publication (https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.5752), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Attenuation of bortezomib-induced shelterin protein dysregulation by hTERT over-expressionA. & B. Cells expressing ectopic hTERT were treated with bortezomib for 24 hours & mRNA levels of shelterin proteins then analyzed using qPCR. The levels of each target mRNA in bortezomib-treated cells were expressed as percentages of those in untreated cells. (A) HEL-hTERT cells & (B) BGC-823-hTERT cells. C. & D. Immunoblotting assessment of TRF1, TRF2 & POT1 protein expression in bortezomib-treated cells. Same sets of cells above were analyzed for TRF1, TRF2 & POT1 protein levels & shown was representative of three independent experiments. (C) HEL-hTERT cells & (D) BGC-823-hTERT cells.* & **: P < 0.05 & 0.01, respectively. BTZ, bortezomib. Image collected & cropped by CiteAb from the following publication (https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.5752), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Widespread dysregulation of shelterin protein expression in bortezomib-treated HEL & BGC-823 cellsA. & B. mRNA levels of shelterin factors TRF1, TRF2, TPP1, POT1, RAP1 & TIN2 in bortezomib-treated cells. Cells were treated with bortezomib for 24 hours & qPCR was used for quantitative assays. The levels of each target mRNA in bortezomib-treated cells were expressed as percentages of those in untreated cells. (A) HEL cells & (B) BGC-823 cells. C. & D. Immunoblotting assessment of TRF1, TRF2 & POT1 protein expression in bortezomib-treated cells. Same sets of cells above were analyzed for TRF1, TRF2 & POT1 protein levels & shown was representative of three independent experiments. (C) HEL cells & (D) BGC-823 cells. * & **: P < 0.05 & 0.01, respectively. BTZ, bortezomib. Image collected & cropped by CiteAb from the following publication (https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.5752), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Publications

Sánchez-Vázquez R, García-Oteyza S, Serrano R et al. Mice carrying the homologous human shelterin POT1-L259S mutation linked to pulmonary fibrosis show a telomerase deficiency-like phenotype with telomere shortening with increasing mouse generations. Genes & development 2025-09-15 [PMID: 40954016]

Lee J, Sohn E, Lee J et al. Distinct mechanisms underlying extrachromosomal telomere DNA generation in ALT cancers Nucleic acids research 2025-08-28 [PMID: 40795958]

Hou J, Yun Y, Jeon B et al. Ginsenoside F1-Mediated Telomere Preservation Delays Cellular Senescence Int J Mol Sci 2023-09-19 [PMID: 37762556] (Western Blot, Human)

Wondisford AR, Lee J, Lu R et Al. Deregulated DNA ADP-ribosylation impairs telomere replication Nat Struct Mol Biol 2024-05-19 [PMID: 38714889]

A Lanna, B Vaz, C D'Ambra, S Valvo, C Vuotto, V Chiurchiù, O Devine, M Sanchez, G Borsellino, AN Akbar, M De Bardi, DW Gilroy, ML Dustin, B Blumer, M Karin An intercellular transfer of telomeres rescues T cells from senescence and promotes long-term immunological memory Nature Cell Biology, 2022-09-15;0(0):. 2022-09-15 [PMID: 36109671]

Zeng J, Hills SA, Ozono E, Diffley JFX Cyclin E-induced replicative stress drives p53-dependent whole-genome duplication Cell 2023-01-19 [PMID: 36681079] (WB, Human)

Chen L, Zhang C, Ma W et al. METTL3-mediated m6A modification stabilizes TERRA and maintains telomere stability Nucleic acids research 2022-11-18 [PMID: 36399511] (WB, Human)

Details:
Dilution used in WB 1:1000

Yu EY, Zahid SS, Aloe S Et al. Reciprocal impacts of telomerase activity and ADRN/MES differentiation state in neuroblastoma tumor biology Communications biology 2021-11-19 [PMID: 34799676] (WB, Human)

Li X, Li X, Xie C Et al. cGAS guards against chromosome end-to-end fusions during mitosis and facilitates replicative senescence Protein & cell 2021-10-22 [PMID: 34676498] (Chemotaxis, Human)

Li T, Lin S, Li C et al. MiR-185 targets POT1 to induce telomere dysfunction and cellular senescence Aging (Albany NY) 2020-07-18 [PMID: 32687062] (WB, Human)

Wu S, Ge Y, Li X et al. BRM-SWI/SNF chromatin remodeling complex enables functional telomeres by promoting co-expression of TRF2 and TRF1 PLoS Genet. 2020-06-01 [PMID: 32502208] (WB, Human)

Swanson MJ, Baribault ME, Israel JN, Bae NS Telomere protein RAP1 levels are affected by cellular aging and oxidative stress. Biomed Rep 2016-08-01 [PMID: 27446538] (WB)

More publications at http://www.novusbio.com/NB500-176

Procedures

Western Blot Protocol for POT1 Antibody (NB500-176)

Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 10-25 ug of total protein per lane.
2. Transfer proteins to PVDF membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain the membrane with Ponceau S (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot TBS -0.05% Tween 20 (TBST).
5. Block the membrane in 5% Non-fat milk in TBST (blocking buffer) for at least 1 hour.
6. Wash the membrane in TBST three times for 10 minutes each.
7. Dilute primary antibody in blocking buffer and incubate overnight at 4C with gentle rocking.
8. Wash the membrane in TBST three times for 10 minutes each.
9. Incubate the membrane in diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturer's instructions) for 1 hour at room temperature.
10. Wash the blot in TBST 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 manufacturer's instructions.

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Products Related to NB500-176

NB800-PC9	HeLa Nuclear Cell Lysate
NB500-176PEP	POT1 Antibody Blocking Peptide
NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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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