

# Product Datasheet

## DNA Polymerase epsilon catalytic subunit A Antibody (3C5.1) - BSA Free NB100-115

Unit Size: 0.1 mg

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

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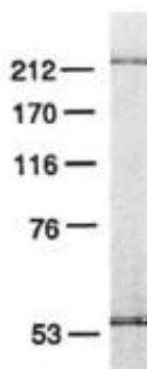


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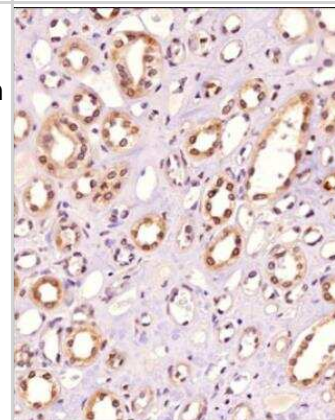
<b>Product Information</b>	
<b>Unit Size</b>	0.1 mg
<b>Concentration</b>	1.0 mg/ml
<b>Storage</b>	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
<b>Clonality</b>	Monoclonal
<b>Clone</b>	3C5.1
<b>Preservative</b>	0.02% Sodium Azide
<b>Isotype</b>	IgG2a
<b>Purity</b>	Immunogen affinity purified
<b>Buffer</b>	PBS
<b>Target Molecular Weight</b>	220 kDa
<b>Product Description</b>	
<b>Host</b>	Mouse
<b>Gene ID</b>	5426
<b>Gene Symbol</b>	POLE
<b>Species</b>	Human, Mouse, Mustelid, Primate, Drosophila (Negative)
<b>Reactivity Notes</b>	Mink samples. This antibody does not work on Drosophila or the baculovirus host cell, and weakly, if at all, on <i>S. cerevisiae</i> POLE.
<b>Specificity/Sensitivity</b>	This is specific to the human DNA pol epsilon and does not recognize DNA pol alpha, beta or delta.
<b>Immunogen</b>	Human DNA Polymerase epsilon purified from HeLa cells.
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunoprecipitation
<b>Recommended Dilutions</b>	Western Blot 5 ug/ml, Immunohistochemistry reported in scientific literature (PMID 29935943), Immunoprecipitation 1:10-1:500, Immunohistochemistry-Paraffin 1:200
<b>Application Notes</b>	In WB, this DNA Polymerase epsilon (3C5.1) antibody detects a single band of 220 kDa (in HeLa extracts) representing the catalytic subunit of DNA Polymerase epsilon. NB100-115 will immunoprecipitate, but only in the absence of salt and even then poorly. 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: DNA Polymerase epsilon catalytic subunit A Antibody (3C5.1) [NB100-115] - SDS-polyacrylamide gel analysis of HeLa DNA pol purified by Mono S FPLC. The Mono S fraction (0.1 mg) was electrophoresed on a 7% SDS-polyacrylamide gel and stained with silver.



Immunohistochemistry-Paraffin: DNA Polymerase epsilon catalytic subunit A Antibody (3C5.1) [NB100-115] - Analysis of a FFPE tissue section of human kidney using 1:200 dilution of DNA Polymerase epsilon catalytic subunit A [3C5.1] antibody. The staining was developed using HRP labeled anti-mouse secondary antibody and DAB reagent, and nuclei of cells were counter-stained with hematoxylin.



## Publications

- Gaspar J M, Mendes N F et al. Downregulation of HIF complex in the hypothalamus exacerbates diet-induced obesity. *Brain Behav Immun* 2018-01-10 [PMID: 29935943] (IF/IHC, Mouse)
- Asahara H, Li Y, Fuss J, Haines DS, Vlatkovic N, Boyd MT, Linn S. Stimulation of human DNA polymerase epsilon by MDM2. *Nucleic Acids Res*;31(9):2451-9. 2003-05-01 [PMID: 12711691]
- Liu W, Linn S. Proteolysis of the human DNA polymerase epsilon catalytic subunit by caspase-3 and calpain specifically during apoptosis. *Nucleic Acids Res*;28(21):4180-8. 2000-11-01 [PMID: 11058115]
- Chui, G, Linn, S. Further characterization of HeLa DNA polymerase epsilon. *J Biol Chem*;270(14):7799-808. 1995-04-07 [PMID: 7536191] (WB, Mouse)
- Vlatkovic N, Guerrera S, Li Y, Linn S, Haines DS, Boyd MT. MDM2 interacts with the C-terminus of the catalytic subunit of DNA polymerase epsilon. *Nucleic Acids Res*;28(18):3581-6. 2000-09-15 [PMID: 10982879]
- Li Y, Pursell ZF, Linn S. Identification and cloning of two histone fold motif-containing subunits of HeLa DNA polymerase epsilon. *J Biol Chem*;275(30):23247-52. 2000-07-28 [PMID: 10801849]
- Kramata P, Downey KM, Paborsky LR. Incorporation and excision of 9-(2-phosphonylmethoxyethyl)guanine (PMEG) by DNA polymerase delta and epsilon in vitro. *J Biol Chem*;273(34):21966-71. 1998-08-21 [PMID: 9705337]
- Islas L, Fairley CF, Morgan WF. DNA synthesis on discontinuous templates by human DNA polymerases: implications for non-homologous DNA recombination. *Nucleic Acids Res*;26(16):3729-38. 1998-08-15 [PMID: 9685489]
- Li Y, Asahara H, Patel VS, Zhou S, Linn S. Purification, cDNA cloning, and gene mapping of the small subunit of human DNA polymerase epsilon. *J Biol Chem*;272(51):32337-44. 1997-12-19 [PMID: 9405441]

## Procedures

### Western Blot protocol for DNA Polymerase epsilon catalytic subunit A Antibody (NB100-115)

DNA Polymerase epsilon catalytic subunit A Antibody (3C5.1):

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 manufacturers instructions.





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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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