

# Product Datasheet

## SMC1 Antibody - BSA Free

### NB100-204

Unit Size: 0.1 ml

Store at 4C. Do not freeze.

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**NB100-204**

SMC1 Antibody - BSA Free

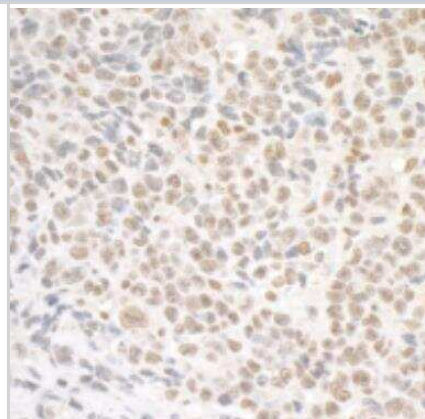
Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C. Do not freeze.
Clonality	Polyclonal
Preservative	0.09% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	Tris-Citrate/Phosphate (pH 7.0 - 8.0)
Target Molecular Weight	160 kDa

Product Description	
Description	This antibody can be used as the primary antibody in a PLA assay with the following as complementing antibodies:NB100-322, NB100-224, NB100-206
Host	Rabbit
Gene ID	8243
Gene Symbol	SMC1A
Species	Human, Mouse
Immunogen	The immunogen recognized by this antibody maps to a region between residue 1175 and the C-terminus of human Structural Maintenance of Chromosomes 1 using the numbering given in entry NP_006297.2
Notes	This antibody can be used as the primary antibody in a PLA assay with the following as complementing antibodies:NB100-322, NB100-224, NB100-206

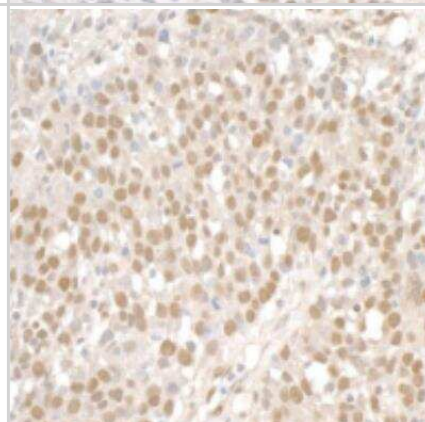
Product Application Details	
Applications	Western Blot, Simple Western, ELISA, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunoprecipitation
Recommended Dilutions	Western Blot 1:2000- 1:10000, Simple Western 1:100, ELISA 1:100-1:2000, Immunohistochemistry 1:2000 -1:10000, Immunocytochemistry/ Immunofluorescence 1:250- 1:1000, Immunoprecipitation 2 - 10 ug/mg lysate, Immunohistochemistry-Paraffin 1:2000 -1:10000
Application Notes	ELISA and Immunoprecipitation were reported in (PMID: 19409520).  In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. See <a href="#">Simple Western Antibody Database</a> for Simple Western validation: Tested in Hek293 and HeLa lysate 0.5 mg/mL, separated by Size, antibody dilution of 1:100. Separated by Size-Wes, Sally Sue/Peggy Sue.

## Images

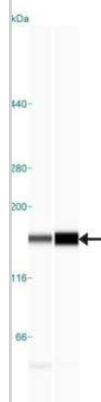
Immunohistochemistry-Paraffin: SMC1 Antibody [NB100-204] - FFPE section of mouse colon carcinoma CT26. Antibody: Affinity purified rabbit anti-SMC1 used at a dilution of 1:5,000 (0.2ug/ml). Detection: DAB



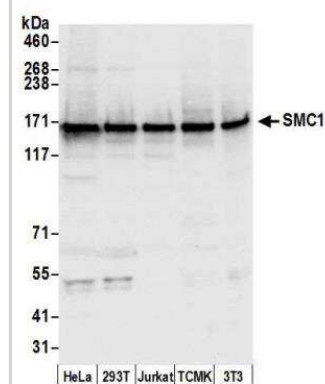
Immunohistochemistry-Paraffin: SMC1 Antibody [NB100-204] - FFPE section of human ovarian carcinoma. Antibody: Affinity purified rabbit anti-SMC1 used at a dilution of 1:5,000 (0.2ug/ml). Detection: DAB



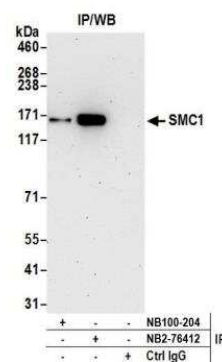
Simple Western: SMC1 Antibody [NB100-204] - Simple Western lane view shows a specific band for SMC1 in 0.5 mg/ml of Hek293 (left) and HeLa (right) lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



SMC1 Antibody [NB100-204] - Detection of human and mouse SMC1 by western blot. Samples: Whole cell lysate (50 ug) from HeLa, HEK293T, Jurkat, mouse TCMK-1, and mouse NIH 3T3 cells prepared using NETN lysis buffer. Antibody: Affinity purified rabbit anti-SMC1 antibody NB100-204 used for WB at 0.1 ug/ml. Detection: Chemiluminescence with an exposure time of 3 seconds. Previous



SMC1 Antibody [NB100-204] - Detection of human SMC1 by western blot of immunoprecipitates. Samples: Whole cell lysate (1.0 mg per IP reaction; 20% of IP loaded) from HeLa cells prepared using NETN lysis buffer. Antibodies: Affinity purified rabbit anti-SMC1 antibody NB100-204 used for IP at 6 ug per reaction. SMC1 was also immunoprecipitated by rabbit anti-SMC1 recombinant monoclonal antibody NB2-76412. For blotting immunoprecipitated SMC1, NB100-204 was used at 1:1000. Detection: Chemiluminescence with an exposure time time of 10 seconds.



## Publications

Arita , Yoh, Nakaoka , Yoshikaz, Matsunaga , Taichi, Kidoya , Hiroyasu, Yamamizu , Kohei, Arima , Yuichiro, Kataoka-Hashimoto , Takahiro, Ikeoka , Kuniyasu, Yasui , Taku, Masaki , Takeshi, Yamamoto , Kaori, Higuchi , Kaori, Park , Jin-Sung, Shirai , Manabu, Nishiyama , Koichi, Yamagishi , Hiroyuki, Otsu , Kinya, Kurihara , Hiroki, Minami , Takashi, Yamauchi-Takahara , Keiko, Koh , Gou Y, Mochizuki , Naoki, Takakura , Nobuyuki, Sakata , Yasushi, Yamashita , Jun K, Komuro , Issei Myocardium-derived angiopoietin-1 is essential for coronary vein formation in the developing heart. *Nat Commun*, 2014-07-29;5(0):4552. 2014-07-29 [PMID: 25072663]

Nayler S, Gatei M, Kozlov S et al. Embryonic Stem Cells/Induced Pluripotent Stem (iPS) Cells: Induced Pluripotent Stem Cells from Ataxia-Telangiectasia Recapitulate the Cellular Phenotype *Stem Cells Transl Med* 2012-12-01 [PMID: 23197857]

Guo Y, Chomiak AA, Hong Y et al. Histone H2A ubiquitination resulting from Brap loss of function connects multiple aging hallmarks and accelerates neurodegeneration *iScience* 2022-07-15 [PMID: 35754718] (WB, Mouse)

Yi F, Zhang Y, Wang Z et al. The deacetylation-phosphorylation regulation of SIRT2-SMC1A axis as a mechanism of antimetastatic catastrophe in early tumorigenesis *Science advances* 2021-02-01 [PMID: 33627431] (IP, WB, Mouse)

A-TWinnipeg: Pathogenesis of rare ATM missense mutation c.6200C>A with decreased protein expression and downstream signaling, early-onset dystonia, cancer, and life-threatening radiotoxicity. Nakamura K, Fike F, Haghayegh S *Mol Genet Genomic Med* 2014-02-02 [PMID: 25077176] (WB, Human)

Wang C, Jette N, Moussienko D et al. ATM-Deficient Colorectal Cancer Cells Are Sensitive to the PARP Inhibitor Olaparib. *Transl Oncol*. 2017-02-06 [PMID: 28182994] (WB, Human)

Batenburg NL, Thompson EL, Hendrickson EA, Zhu XD. Cockayne syndrome group B protein regulates DNA double-strand break repair and checkpoint activation. *EMBO J*. 2015-03-27 [PMID: 25820262] (WB, Mouse)

Houlihan SL, Feng Y. The scaffold protein Nde1 safeguards the brain genome during S phase of early neural progenitor differentiation. *Elife*. 2014-09-23 [PMID: 25245017] (IHC-P, Mouse)

Puccini J, Shalini S, Voss AK et al. Loss of caspase-2 augments lymphomagenesis and enhances genomic instability in *Atm*-deficient mice. *Proc Natl Acad Sci U S A* 2013-12-03 [PMID: 24248351] (WB, Mouse)

Walters R, Kalb R, Gatei M et al. Human RAD50 deficiency in a Nijmegen breakage syndrome-like disorder. *Am J Hum Genet*. 2009-05-01 [PMID: 19409520] (IP, WB, Human)

Yoshizawa-Sugata N, Masai H. Roles of human AND-1 in chromosome transactions in S phase. *J Biol Chem* 2009-07-01 [PMID: 19439411]

Rajesh C, Baker DK, Pierce AJ, Pittman DL. The splicing-factor related protein SFPQ/PSF interacts with RAD51D and is necessary for homology-directed repair and sister chromatid cohesion *Nucleic Acids Res* 2011-01-01 [PMID: 20813759] (WB, Mouse)

More publications at <http://www.novusbio.com/NB100-204>



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### **Products Related to NB100-204**

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NB800-PC9	HeLa Nuclear Cell Lysate
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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### **Limitations**

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