Product Datasheet

SCP1 Antibody - BSA Free

NB300-229

Unit Size: 0.1 ml

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

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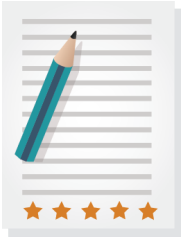
Reviews: 3 Publications: 54

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
www.novusbio.com/NB300-229

Updated 12/20/2023 v.20.1



NB300-229

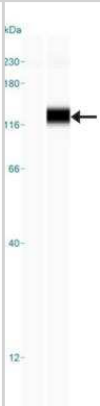
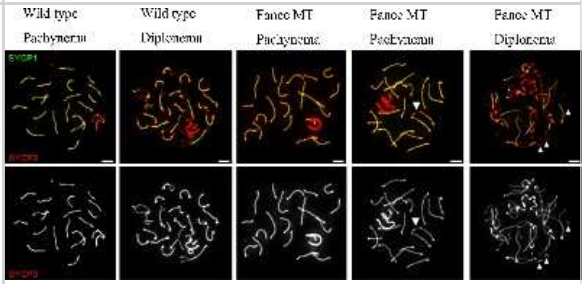
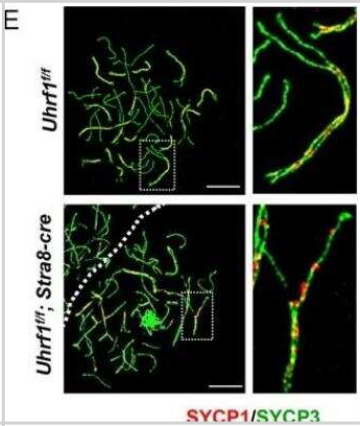
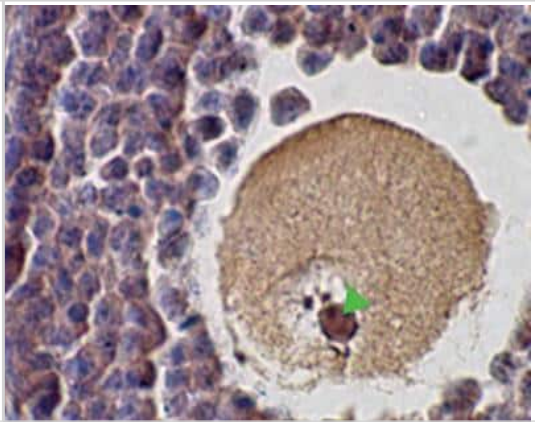
SCP1 Antibody - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS

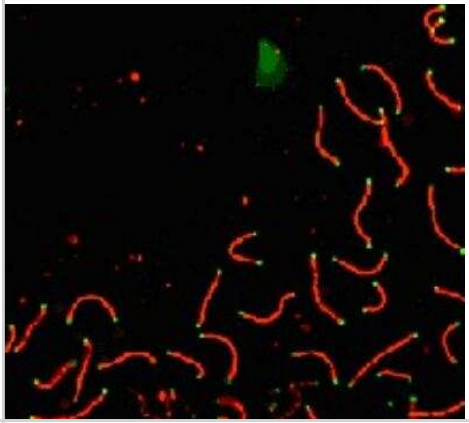
Product Description	
Host	Rabbit
Gene ID	6847
Gene Symbol	SYCP1
Species	Mouse, Rat, Chicken, Mammal, Parasite, Monkey, Human (Negative)
Reactivity Notes	Mammal reactivity reported in scientific literature (PMID: 25981592). Parasite reactivity reported in scientific literature (PMID: 27084479). Chicken reactivity reported in scientific literature (PMID: 28174243). Use in Monkey reported in scientific literature (PMID: 31907447). This antibody has not been shown to have human reactivity.
Immunogen	A synthetic peptide made to the C-terminus of the mouse SCP1 protein sequence. [UniProt# Q62209]

Product Application Details	
Applications	Western Blot, Simple Western, Chromatin Immunoprecipitation, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation, Chromatin Immunoprecipitation (ChIP)
Recommended Dilutions	Western Blot, Simple Western 1:100, Chromatin Immunoprecipitation 1:10 - 1:500. Use reported in scientific literature (PMID 27486799), Immunohistochemistry 1:750, Immunocytochemistry/ Immunofluorescence 1:100 - 1:750, Immunoprecipitation, Immunohistochemistry-Paraffin 1:750, Immunohistochemistry-Frozen 1:750, Chromatin Immunoprecipitation (ChIP) 1:10-1:500
Application Notes	In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. Separated by Size-Wes, Sally Sue/Peggy Sue.

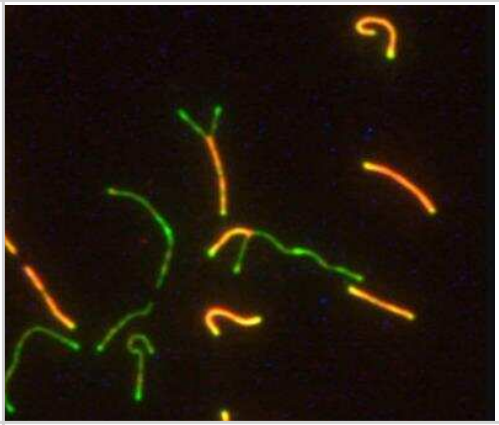
Images

Simple Western: SCP1 Antibody [NB300-229] - Simple Western lane view shows a specific band for SCP1 in 0.5 mg/ml of Human Testis (left) and Mouse Testis (right) lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.	
Western Blot: SCP1 Antibody [NB300-229] - Meiotic chromosome spreads from wild type and Fance mutant (MT) primary spermatocytes isolated from the testes at 20 dpp. Each chromatin spread was staged by analyzing SYCP3 (red) and SYCP1 (green), which are axial element and central region components of the synaptonemal complex respectively. Most of the Fance mutant spermatocytes displayed normal synapsis (middle panels); however a sub-set displayed synapsis abnormalities including an association between non-homologous chromosome ends (arrow head) and abnormal SYCP3 structures (arrows). Dearth and Delayed Maturation of Testicular Germ Cells in Fanconi Anemia E Mutant Male Mice. *PLoS One* (2016)	
Immunocytochemistry/Immunofluorescence: SCP1 Antibody - BSA Free [NB300-229] - Double immunofluorescence of testicular spread preparations of the adult mice, SYCP3 (green) and SCP1 (red). Image collected and cropped by CiteAb from the following publication (//pubmed.ncbi.nlm.nih.gov/32081844/) licensed under a CC-BY license.	
Immunohistochemistry-Paraffin: SCP1 Antibody [NB300-229] - Punctate staining of murine SCP1 in mouse ovary using NB300-229.	

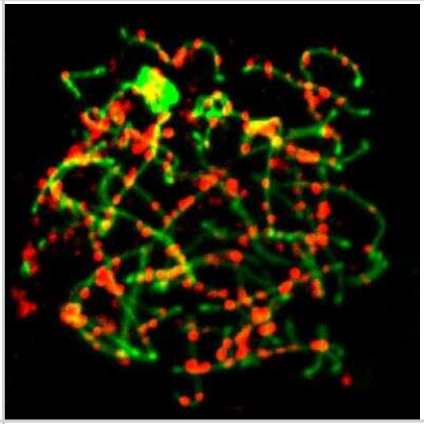
Immunocytochemistry/Immunofluorescence: SCP1 Antibody [NB300-229] - SCP1 labeled in mouse pachytene preparation (red), using NB300-229. CDK2 staining, near teleomeres, is also present (green).



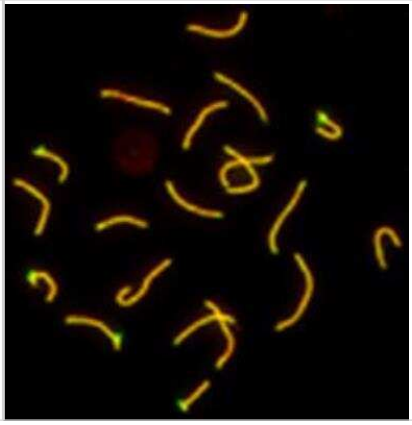
Immunocytochemistry/Immunofluorescence: SCP1 Antibody [NB300-229] - Spermatocytes cells fixed in PFA. Detected with anti-mouse 594. ICC/IF image submitted by a verified customer review.



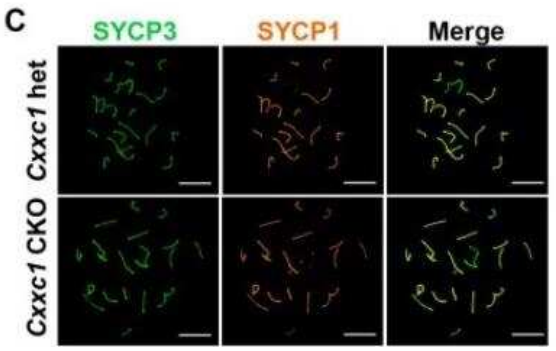
Immunocytochemistry/Immunofluorescence: SCP1 Antibody [NB300-229] - Mouse spermatozoa. Green: SCP1 staining. ICC/IF image submitted by a verified customer review.



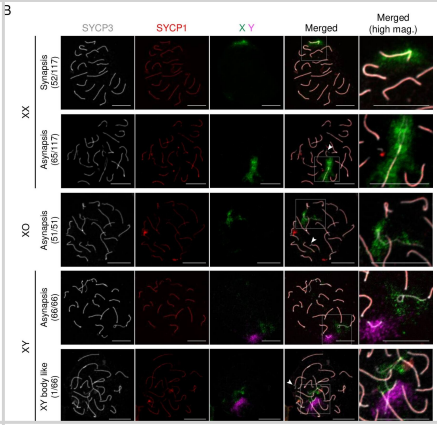
Immunocytochemistry/Immunofluorescence: SCP1 Antibody [NB300-229] - Mouse spermatocyte. Red: scp1 colocalized with scp3 (green). ICC/IF image submitted by a verified customer review.



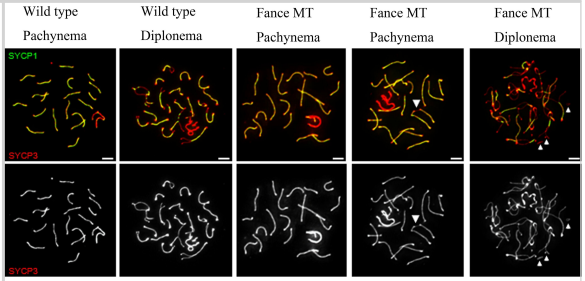
Immunocytochemistry/Immunofluorescence: SCP1 Antibody - BSA Free [NB300-229] - Immunostaining of SCP3/SYCP3 (NB300-231) and SCP1 on adult Cxxc1 het and CKO chromosome spreads. Green, SCP3/SYCP3; orange, SCP1. Scale bar, 10 um. Image collected and cropped by CiteAb from the following publication (//pubmed.ncbi.nlm.nih.gov/30365547/) licensed under a CC-BY license.



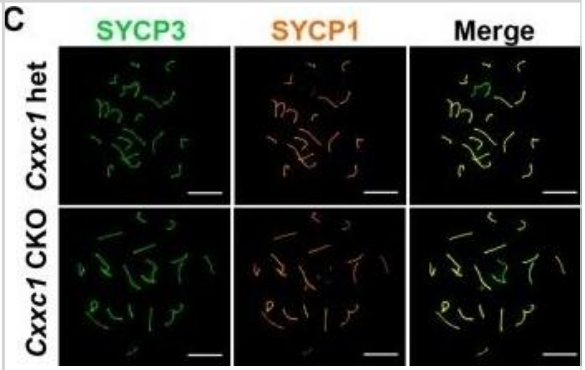
Meiotic progression and chromosome paring in XX, XO and XY oocytes. (B) Pairing of homologous chromosomes in XX, XO and XY oocytes. Images show the immunofluorescence analysis of SYCP3 (white) and SYCP1 (red), and FISH analysis of the X chromosome (green) and Y chromosome (purple). The dashed squares in the merged images are shown at high magnification (right). The numbers of samples showing the phenotype are shown with the total number tested (left). Arrowheads indicate asynapsed bivalents at the end of the chromosomes. Scale bars, 10 um. Image collected and cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32214314), licensed under a CC-BY licence.



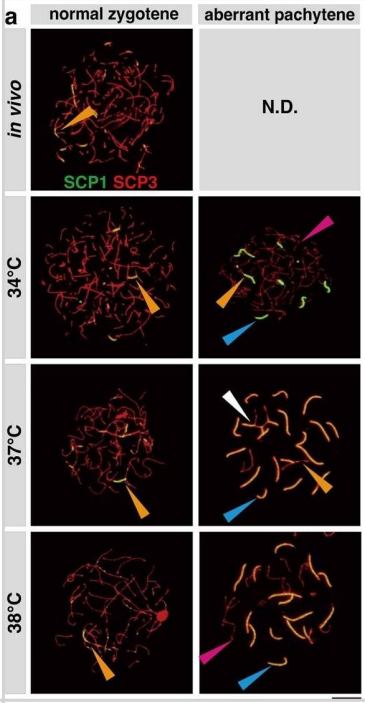
Meiotic spreads.Meiotic chromosome spreads from wild type and Fance mutant (MT) primary spermatocytes isolated from the testes at 20 dpp. Each chromatin spread was staged by analyzing SYCP3 (red) and SYCP1 (green), which are axial element and central region components of the synaptonemal complex respectively. Most of the Fance mutant spermatocytes displayed normal synapsis (middle panels); however a sub-set displayed synapsis abnormalities including an association between non-homologous chromosome ends (arrow head) and abnormal SYCP3 structures (arrows). Image collected and cropped by CiteAb from the following publication (https://dx.plos.org/10.1371/journal.pone.0159800), licensed under a CC-BY licence.



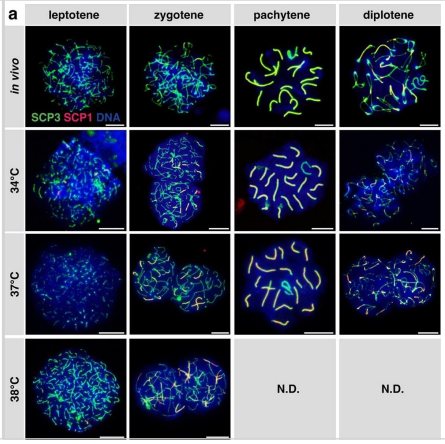
hIAPP upregulates the HIF1α/PFKFB3 stress pathway. a Summary of the differentially expressed genes of interest after microarray analysis25 performed on RNA isolated from wild type (WT) and hIAPP overexpressing (HIP) rat islets (4.5 months) presented as a fold change over WT. Asterisk represents genes that were differentially expressed in one experiment. b LDHA and MCT1 mRNA levels in HIP versus WT as measured by qRT-PCR. c Lactate production rate (fold change) measured in isolated islets from HIP relative to WT. d Representative Western blot of PFKFB3 and HIF1α protein levels in whole cell extracts and nuclear-enriched fractions of islets from 6 months old WT (3) and HIP (3) rats. GAPDH and PARP were used as loading controls for whole cell extract (WCE) and nuclear extracts, respectively. e Quantification of HIF1α (upper panel) and PFKFB3 (lower panel) in cytoplasmic and nuclear fractions. Data are presented as mean ± SEM, n = 3 independent experiments for (b) and (d), and n = 4 independent experiments for (c). Statistical significance was analyzed by Student t-test (*p < 0.05, **p < 0.01) Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/31213603), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



PRDX proteins bind to HIF-1α and HIF-2αA. HeLa cells were transfected with an expression vector encoding V5-epitope-tagged PRDX2 (PRDX2-V5) and exposed to 1% O2 for 24 h. Whole cell lysate (WCL) was subject to immunoprecipitation (IP) using anti-HIF-1α antibody or control IgG, followed by immunoblot assays with antibody against V5 epitope or HIF-1α. B. HeLa cells were transfected with PRDX2-V5 vector and exposed to 1% O2 for 24 h. The WCL was subject to IP using anti-V5 antibody or control IgG, followed by immunoblot assays with antibody against V5 or HIF-1α. Light IgG: immunoglobulin light chain from the secondary antibody. C. HeLa cells were transfected with vector encoding a V5-tagged PRDX family member and exposed to 1% O2 for 24 h. WCL was subject to IP using anti-HIF-1α antibody, followed by immunoblot assays with antibody against V5 or HIF-1α. D. HeLa cells were transfected with empty vector (EV) or vector encoding a V5-tagged PRDX family member and exposed to 1% O2 for 24 h. WCL was subject to IP using anti-HIF-2α antibody, followed by immunoblot assays with antibody against V5 or HIF-2α. Image collected and cropped by CiteAb from the following open publication (https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.7142), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



MRE11 associates with the DS region of OriP.A) DNA affinity purification assays were performed with Raji nuclear extracts and DNA templates derived from DS wt, DS nm-, or ΔDS. Input and template bound proteins were analyzed by Western blot with antibodies to TRF2, MRE11, EBNA1, PCNA, and PARP1, as indicated. B) Schematic of template DNA used for DNA affinity purification in A, and their respective protein binding sites. C) ChIP assays to monitor EBNA1, TRF2, and MRE11 binding at OriP wt or OriP nm- in transfected 293 cells. Immunoprecipitated DNA was quantified by real time PCR relative to total input DNA recovered for each transfected cell. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/18040525), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Davies B, Zhang G, Moralli D et al. Characterization of meiotic recombination intermediates through gene knockouts in founder hybrid mice Genome research 2023-11-17 [PMID: 37977820] (IHC, Mouse)

Details:
Sample type: Testis

Zhang J, Zhou X, Wan D et al. TMPRSS12 Functions in Meiosis and Spermiogenesis and Is Required for Male Fertility in Mice Frontiers in Cell and Developmental Biology 2022-04-25 [PMID: 35547804]

Hirano K, Nonami Y, Nakamura Y et al. Temperature sensitivity of DNA double-strand break repair underpins heat-induced meiotic failure in mouse spermatogenesis Communications Biology 2022-05-26 [PMID: 35618762] (In Vivo)

Larose H, Kent T, Ma Q et al. Regulation of meiotic progression by Sertoli-cell androgen signaling Molecular Biology of the Cell 2020-12-01 [PMID: 33026960] (ICC/IF)

Faber EB, Sun L, Tang J et al. Development of allosteric and selective CDK2 inhibitors for contraception with negative cooperativity to cyclin binding Nature communications 2023-06-03 [PMID: 37270540] (ICC/IF, Mouse)

Details:
ICC/IF (on chromosome spreads): antibody incubation at 1:100)

Lee S, Kuramochi-Miyagawa S, Nagamori I, Nakano T Effects of transgene insertion loci and copy number on Dnmt3L gene silencing through antisense transgene-derived PIWI-interacting RNAs RNA (New York, N.Y.) 2022-02-10 [PMID: 35145000] (ICC/IF, Mouse)

Carbajal A, Gryniuk I, de Castro R, Pezza R Efficient enrichment of synchronized mouse spermatocytes suitable for genome-wide analysis. bioRxiv 2022-01-01 (Mouse)

Kagiwada S, Aramaki S, Wu G et al. YAP creates epiblast responsiveness to inductive signals for germ cell fate Development (Cambridge, England) 2021-09-16 [PMID: 34528691] (ICC/IF, Mouse)

Takada Y, Yaman-Deveci R, Shirakawa T et al. Maintenance DNA methylation in pre-meiotic germ cells regulates meiotic prophase by facilitating homologous chromosome pairing Development (Cambridge, England) 2021-05-15 [PMID: 33998651]

Osawa Y, Murata K, Usui M et al. EXOC1 plays an integral role in spermatogonia pseudopod elongation and spermatocyte stable syncytium formation in mice eLife 2021-05-11 [PMID: 33973520] (IHC-P, Mouse)

Spangenberg V, Arakelyan M, Cioffi MB et al. Cytogenetic mechanisms of unisexuality in rock lizards Sci Rep 2020-05-26 [PMID: 32457493] (ICC/IF)

Hamada N, Hamazaki N, Shimamoto S et Al. Germ cell-intrinsic effects of sex chromosomes on early oocyte differentiation in mice PLoS Genet. 2020-03-26 [PMID: 32214314] (IF/IHC, Mouse)

More publications at http://www.novusbio.com/NB300-229

Procedures

Serum protocol for SCP1 Antibody (NB300-229)

Immunofluorescence Procedure
1. Freshly prepared slides are soaked in 1X ADB for 75 minutes.
2. Primary antibodies are added concurrently (SCP1 and CDK2).
3. The primary antibodies are incubated overnight in a hudid chamber (37 degrees Celcius).
4. The slides are washed for 40 minutes in 1X ADB.
5. The slides are detected with the appropriate secondary antibodies (RDAR for SCP1 and FDAM for CDK2).
6. The slides are incubated for 4 hours in a humid chamber (37 degrees Celcius).
7. The slides are washed for 20 minutes in 1X ADB, followed by 3 washes, 10 minutes each, in 1X PBS.
8. The slides are counterstained with DAPI.
9. Images are captured after allowing the slides to remain in the dark overnight at RT.

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Products Related to NB300-229

NB300-229PEP	SCP1 Antibody Blocking Peptide
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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