Product Datasheet

RAP80 Antibody - BSA Free
NBP1-87156

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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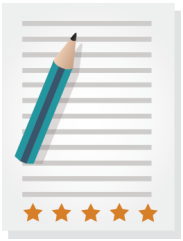
Publications: 11

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
www.novusbio.com/NBP1-87156

Updated 2/21/2025 v.20.1



NBP1-87156

RAP80 Antibody - BSA Free

Product Information

Unit Size	0.1 ml
Concentration	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
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 (pH 7.2) and 40% Glycerol

Product Description

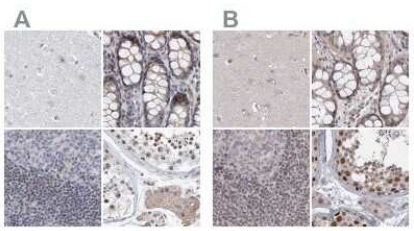
Host	Rabbit
Gene ID	51720
Gene Symbol	UIMC1
Species	Human
Reactivity Notes	Immunogen displays the following percentage of sequence identity for non-tested species: Mouse (82%)
Immunogen	This antibody was developed against Recombinant Protein corresponding to amino acids: LLRKAIAESLNSCRPSDASATRSRPLATGPSSQSHQEKTTDSGLTEGIWQLVPP SLFKGSHISQGNEAEEREEPWDHTEKTEEEPVSGSSG

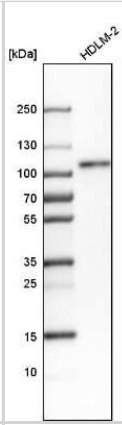
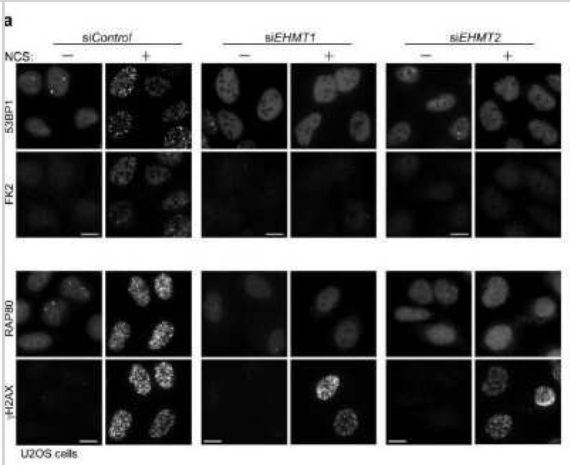
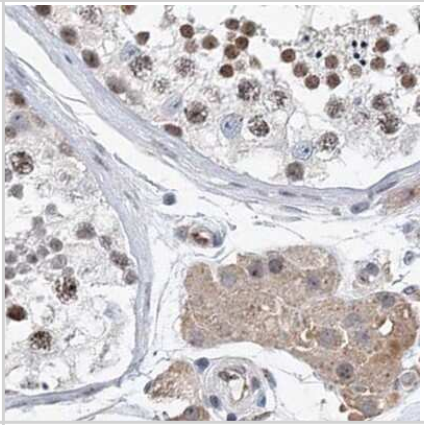
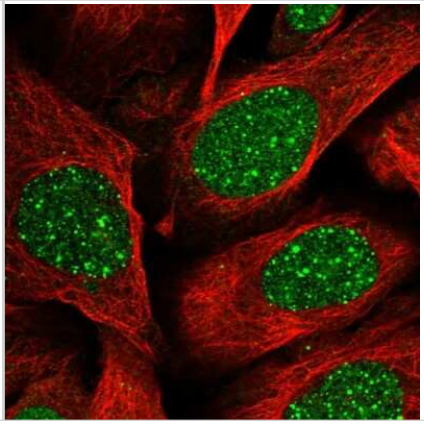
Product Application Details

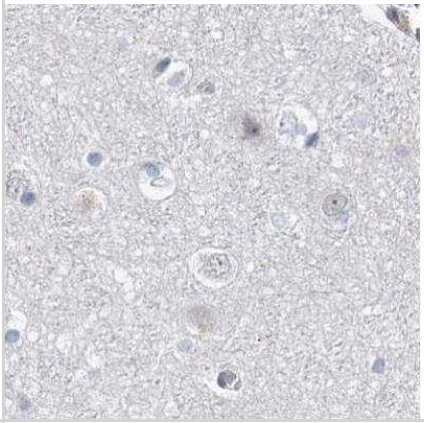
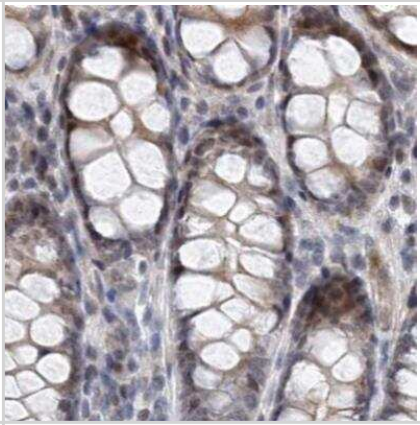
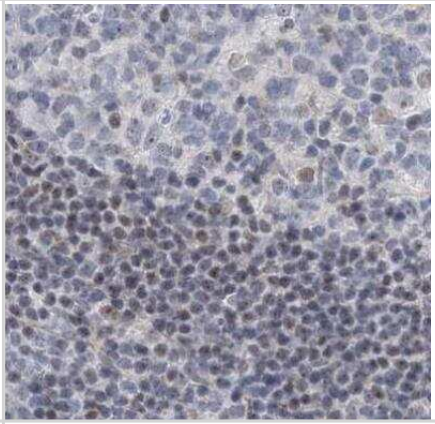
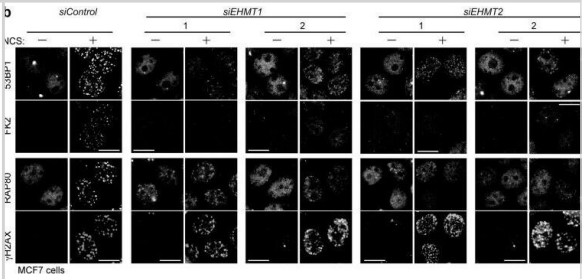
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunomicroscopy
Recommended Dilutions	Western Blot 0.04-0.4 ug/ml, Immunohistochemistry 1:50 - 1:200, Immunocytochemistry/ Immunofluorescence 0.25-2 ug/ml, Immunohistochemistry-Paraffin 1:50-1:200, Immunomicroscopy Reported in scientific literature (PMID:33450211)
Application Notes	For IHC-Paraffin, HIER pH 6 retrieval is recommended. ICC/IF, Fixation Permeabilization: Use PFA/Triton X-100.

Images

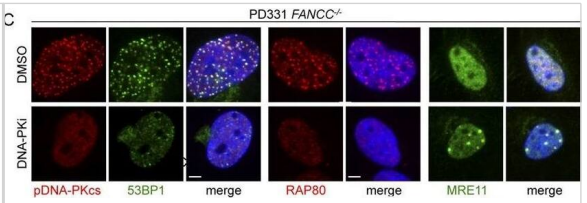
Immunohistochemistry-Paraffin: RAP80 Antibody [NBP1-87156] - Staining of human cerebral cortex, colon, lymph node and testis using Anti-UIMC1 antibody NBP1-87156 (A) shows similar protein distribution across tissues to independent antibody NBP1-87157 (B).



Western Blot: RAP80 Antibody [NBP1-87156] - Analysis in human cell line HDLM-2.	
Immunocytochemistry/Immunofluorescence: RAP80 Antibody [NBP1-87156] - EHMT1 and EHMT2 are required for accumulation of ubiquitin conjugates and repair factors at DNA damage sites. ICC/IF analysis of U2OS cells transfected with indicated siRNA, and co-immunostained with indicated antibodies at 2 h after exposure to neocarzinostatin (NCS, 50 ng/ml for 15 min). Representative images of each treated or control cells shown. DNA damage induced foci are quantified as the % of cells with more than 5 large foci in nuclei after background subtraction, each based on at least 150 cells, 3 independent experiments (right). Error bars represent standard deviation (SD). Statistical significance was calculated using two-tailed, unpaired t-test compared with control cells; *P < 0.0001. Scale bar, 10 um. Image collected and cropped by CiteAb from the following publication (https://www.nature.com/articles/s41598-018-29239-3), licensed under a CC-BY license.	
Immunohistochemistry-Paraffin: RAP80 Antibody [NBP1-87156] - Staining of human testis.	
Immunocytochemistry/Immunofluorescence: RAP80 Antibody [NBP1-87156] - Staining of human cell line U-2 OS shows localization to nucleus & nuclear bodies. Antibody staining is shown in green.	

Immunohistochemistry-Paraffin: RAP80 Antibody [NBP1-87156] - Staining of human cerebral cortex using Anti-UIMC1 antibody.	
Immunohistochemistry-Paraffin: RAP80 Antibody [NBP1-87156] - Staining of human colon using Anti-UIMC1 antibody.	
Immunohistochemistry-Paraffin: RAP80 Antibody [NBP1-87156] - Staining of human lymph node using Anti-UIMC1 antibody.	
Immunocytochemistry/ Immunofluorescence: RAP80 Antibody [NBP1-87156] - EHMT1 & EHMT2 are required for accumulation of ubiquitin conjugates & repair factors at DNA damage sites. (a,b) Immunofluorescence analysis of U2OS cells (a) & MCF7 (b) cells transfected with indicated siRNA, & co-immunostained with indicated antibodies at 2 h after exposure to neocarzinostatin (NCS, 50 ng/ml for 15 min). A representative image of each treated or control cells is shown, as indicated. DNA damage induced foci are quantified as the percentage of cells with more than 5 large foci in nuclei after background subtraction, each based on at least 150 cells from three independent experiments (right). Error bars represent standard deviation (SD). Statistical significance was calculated using two-tailed, unpaired t-test compared with control cells; *P < 0.0001. The knockdown efficiencies with individual siRNAs against EHMT1 & EHMT2 are shown in Fig. S3a,b. Scale bar, 10 µm. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/30022091), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Immunocytochemistry/ Immunofluorescence: RAP80 Antibody [NBP1-87156] - NHEJ pathway inhibition rescue HR & cell survival in FA cells. (A) Representative images of pDNA-PKcs (red) & MRE11 (green) foci in nuclei (DAPI stained, blue) of FANCC-corrected (PD331 corr) or FANCC-mutated (PD331 FANCC−/−) cells in which 53BP1 was depleted by siRNA White line: 2 µm. (B) Histogram presents the frequency of MRE11-positive FANCC−/− cells 48 h after 53BP1 downregulation by siRNA transfection. The presented data are the mean of three independent experiments; error bars indicate S.D. *** indicates P < 0.001 using a Student's t-test. (C) Representative images of pDNA-PKcs (red), 53BP1 (green), RAP80 (red) or MRE11 (green) foci in nuclei (DAPI stained, blue) of FANCC-deficient cells (PD331 FANC−/−) treated with DMSO or with a DNA-PK specific inhibitor. The cells were treated with DNA-PK inhibitor (DNA-PKi 10 µm) for 2 h before MMC exposure (200 ng/ml). White line: 2 µm. (D & E) Clonogenic survival of FANCC-proficient (D, PD331 corr) or -mutated (E, PD331 FANCC−/−) cells after 53BP1 depletion by siRNA and/or DNA-PK inhibition. The cells were treated with MMC at the indicated doses. The presented data are the mean of three independent experiments; error bars indicate S.D. * indicates P < 0.05 using a Student's t-test. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/26446986), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Sherker A, Chaudhary N, Adam S et al. Two redundant ubiquitin-dependent pathways of BRCA1 localization to DNA damage sites EMBO reports 2021-12-06 [PMID: 34726323] (Western Blot, Immunocytochemistry/ Immunofluorescence)

Jiang Q, Foglizzo M, Morozov YI et al. Autologous K63 deubiquitylation within the BRCA1-A complex licenses DNA damage recognition The Journal of cell biology 2022-09-05 [PMID: 35938958] (WB, Mouse, Human)

Details:
Dilution used 1:1000

Nakamura K, Kustatscher G, Alabert C, et al. Proteome dynamics at broken replication forks reveal a distinct ATM-directed repair response suppressing DNA double-strand break ubiquitination Molecular cell 2021-01-11 [PMID: 33450211] (ICC/IF, IM, Human)

Bodo S, Campagne C, Thin TH et al. Single-dose radiotherapy disables tumor cell homologous recombination via ischemia/reperfusion injury J. Clin. Invest. 2018-11-27 [PMID: 30480549] (IHC-P, Human)

Yasuhara T, Kato R, Hagiwara Y et al. Human Rad52 Promotes XPG-Mediated R-loop Processing to Initiate Transcription-Associated Homologous Recombination Repair. Cell 2018-09-18 [PMID: 30245011] (Human)

Watanabe S, Iimori M, Chan DV et al. MDC1 methylation mediated by lysine methyltransferases EHMT1 and EHMT2 regulates active ATM accumulation flanking DNA damage sites. Sci Rep. 2018-07-18 [PMID: 30022091] (ICC/IF, Human)

Baranes-Bachar K, Levy-Barda A, Oehler J et al. The Ubiquitin E3/E4 Ligase UBE4A Adjusts Protein Ubiquitylation and Accumulation at Sites of DNA Damage, Facilitating Double-Strand Break Repair. Mol. Cell. 2018-03-01 [PMID: 29499138] (Human)

Ha K, Ma C, Lin H et al. The anaphase promoting complex impacts repair choice by protecting ubiquitin signalling at DNA damage sites. Nat Commun. 2017-06-12 [PMID: 28604711] (Human)

Renaud E, Barascu A, Rosselli F. Impaired TIP60-mediated H4K16 acetylation accounts for the aberrant chromatin accumulation of 53BP1 and RAP80 in Fanconi anemia pathway-deficient cells. Nucleic Acids Res 2016-01-29 [PMID: 26446986] (WB)

Lin ZP, Ratner ES, Whicker ME et al. Triapine Disrupts CtIP-Mediated Homologous Recombination Repair and Sensitizes Ovarian Cancer Cells to PARP and Topoisomerase Inhibitors. Mol. Cancer Res. 2014-02-28 [PMID: 24413181]

Kato K, Nakajima K, Ui A et al. Fine-Tuning of DNA Damage-Dependent Ubiquitination by OTUB2 Supports the DNA Repair Pathway Choice. Mol. Cell 2014-02-24 [PMID: 24560272] (ICC/IF, Human)

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NBP1-87156PEP	RAP80 Recombinant Protein Antigen
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NBP2-24891	Rabbit IgG Isotype Control

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