

Product Datasheet

SDHAF4 Antibody - BSA Free

NBP1-86324

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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NBP1-86324

SDHAF4 Antibody - BSA Free

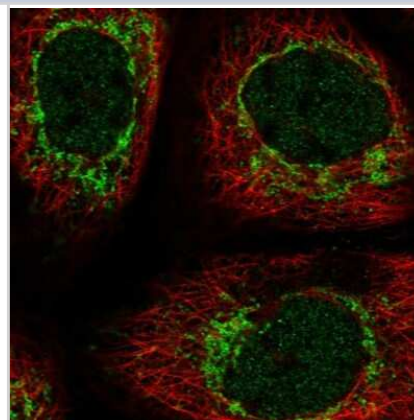
Product Information	
Unit Size	0.1 ml
Concentration	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Affinity purified
Buffer	PBS (pH 7.2) and 40% Glycerol

Product Description	
Description	Novus Biologicals Rabbit SDHAF4 Antibody - BSA Free (NBP1-86324) is a polyclonal antibody validated for use in IHC, WB and ICC/IF. Anti-SDHAF4 Antibody: Cited in 1 publication. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	135154
Gene Symbol	C6ORF57
Species	Human
Immunogen	This antibody was developed against Recombinant Protein corresponding to amino acids: SPLLCHSLRKTSSSQGGKSELVKQSLKPKLPEGRFDAPEDSHLEKEPLEKFP DDVNPVTKEKGGPRGPEPTRYGDWERKGRCID

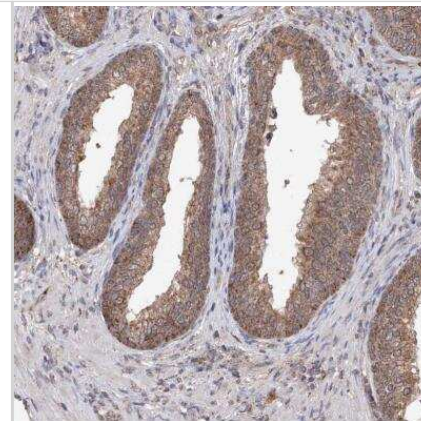
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry
Recommended Dilutions	Western Blot 0.04-0.4 ug/ml, Immunohistochemistry 1:20 - 1:50, Immunocytochemistry/ Immunofluorescence 0.25-2 ug/ml, Immunohistochemistry-Paraffin 1:20 - 1:50
Application Notes	For IHC-Paraffin, HIER pH 6 retrieval is recommended. ICC/IF Fixation Permeabilization: Use PFA/Triton X-100.

Images

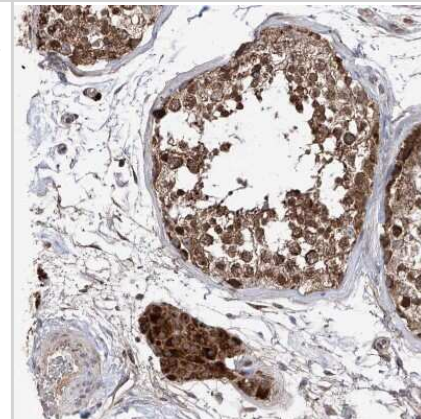
Immunocytochemistry/Immunofluorescence: SDHAF4 Antibody [NBP1-86324] - Staining of human cell line A-431 shows localization to nucleus & mitochondria. Antibody staining is shown in green.



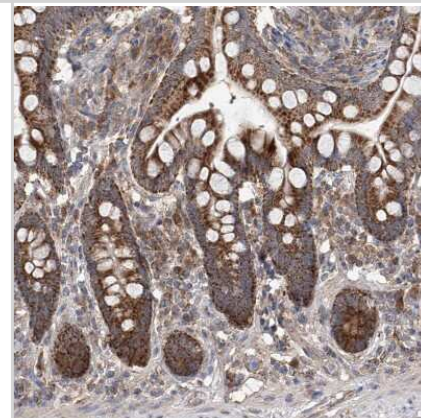
Immunohistochemistry-Paraffin: SDHAF4 Antibody [NBP1-86324] - Staining of human prostate shows weak to moderate cytoplasmic positivity in glandular cells.



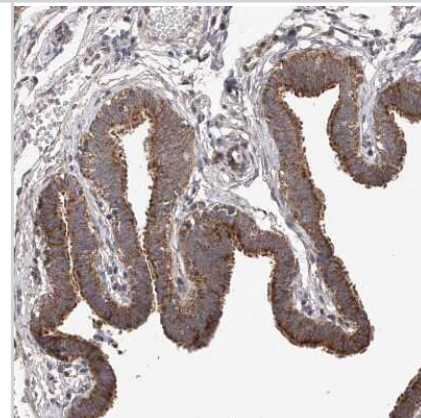
Immunohistochemistry-Paraffin: SDHAF4 Antibody [NBP1-86324] - Staining of human testis shows moderate to strong cytoplasmic positivity in Leydig cells.



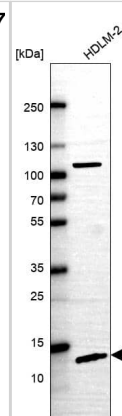
Immunohistochemistry-Paraffin: SDHAF4 Antibody [NBP1-86324] - Staining of human small intestine shows moderate to strong cytoplasmic positivity in glandular cells.



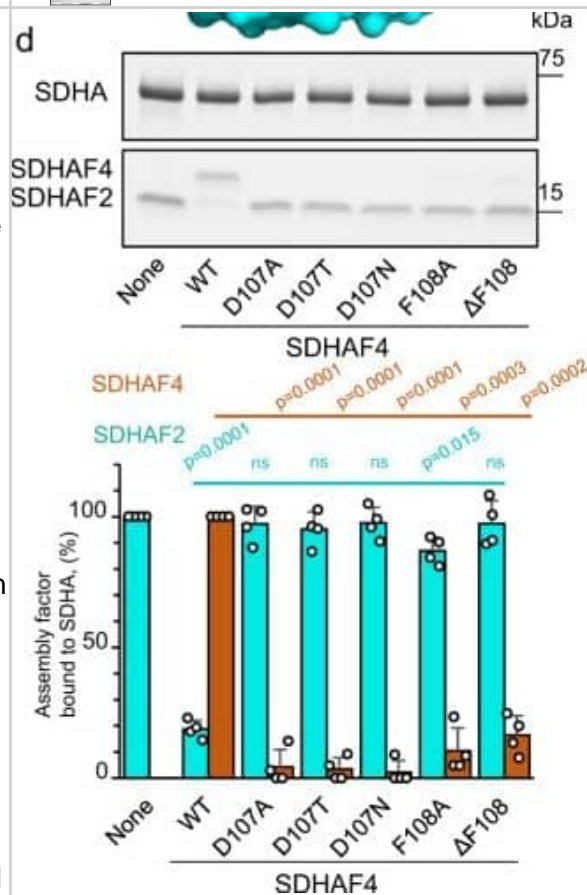
Immunohistochemistry-Paraffin: SDHAF4 Antibody [NBP1-86324] - Staining of human fallopian tube shows moderate to strong cytoplasmic positivity in glandular cells.



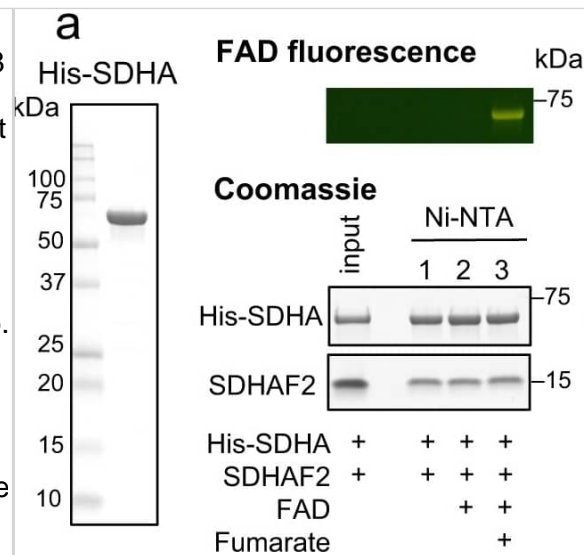
Analysis in control (vector only transfected HEK293T lysate) and C6orf57 over-expression lysate (Co-expressed with a C-terminal myc-DDK tag (~3.1 kDa) in mammalian HEK293T cells).



Structure of the SDHA-AF2-AF4 complex. a Ribbon diagram of the human SDHA-AF2-AF4 complex. SDHA is shown in gray, SDHAF2 is shown in cyan, and SDHAF4 is shown in orange. The covalent FAD is shown as a stick representation with carbons yellow, oxygens red, nitrogens blue, and phosphorous orange. The isoalloxazine functional group of the FAD is positioned between the flavin-binding domain of SDHA and the C-terminus of SDHAF4. Key interactions are shown in the inset. b Orientation of SDHAF2 and SDHAF4 in the complex. SDHA is shown as ribbons and SDHAF2 and SDHAF4 are shown as space-filling. The view is rotated 70 around the x-axis as compared to the view in (a). c Interactions between the C-terminus of SDHAF4 and the SDHA active site. The position of the conserved C-terminus is stabilized by interactions between SDHAF4D107 and SDHAF4F108 and SDHA active site residues SDHAR451 and SDHAH407. d Validation of SDHAF4 binding residues using mutagenesis. SDHAF4 containing the indicated C-terminal mutations was evaluated for the ability to displace SDHAF2 from the SDHA-AF2 complex. The assembly factors that remained bound to SDHA were visualized after the separation of the reaction on an SDS-PAGE gel. Mutations involved SDHAF4D107 (SDHAF4D107A, SDHAF4D107T and SDHAF4D107N), and SDHAF4F108 (SDHAF4F108A and SDHAF4ΔF108). The SDS-PAGE gel is representative of n = 4 independent experiments. ImageJ quantitation of SDHAF2 (teal) and SDHAF4 (brown) was used to calculate the percentage of each assembly bound to SDHA, as compared to a control (100%). This is expressed on the y-axis of each bar graph as mean values +/- SD. Bar graphs show mean values +/- SD, and statistics were calculated by paired two-tailed Student's t-test. Source data are provided as a Source Data file. Image collected and cropped by CiteAb from the following open publication (<https://www.nature.com/articles/s41467-023-44563-7>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Pairwise interactions between SDHA, SDHAF2, and SDHAF4. The interaction of His-SDHA (2.6 μ M) with SDHAF2 (6.4 μ M) and SDHAF4 (8 μ M) was evaluated by using a Ni-NTA pull-down assay. SDHA was tested in several of its forms: apo-SDHA, SDHA with bound non-covalent FAD, and holo-SDHA with covalently attached FAD. His6-SDHA was incubated with purified SDHAF2 and SDHAF4 as indicated and associated proteins were evaluated by SDS-PAGE. FAD was added at 75 μ M and fumarate was added at 5 mM. Yellowish FAD fluorescence is observed when SDHA is covalently attached to FAD. ImageJ densitometry, shown at the bottom, was measured as arbitrary units (arb. units.) and used to evaluate the relative binding of SDHAF2 (teal) and SDHAF4 (brown) to SDHA. The y-axis on the densitometry quantitation expresses these as a ratio. a Input protein and pairwise interaction between SDHA and SDHAF2. (left) input SDHA, (right) interaction between SDHA and SDHAF2 in the presence of FAD and fumarate. Note that only after the addition of fumarate does the covalent bond between FAD and SDHA form (lane 3). b Pairwise interaction of SDHA and SDHAF4. c Interaction of SDHA with the assembly factors after incubation with both SDHAF2 and SDHAF4. d Displacement of SDHAF2 after purified holo-SDHA/SDHAF2 complex (2 μ M) was incubated with SDHAF4. All Coomassie gels are representative of n = 4 independent experiments, bar graphs show mean values \pm SD, and statistics were done by paired two-tailed Student's t-test. Source data are provided as a Source Data file. Image collected and cropped by CiteAb from the following open publication (<https://www.nature.com/articles/s41467-023-44563-7>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Sharma P, Maklashina E, Voehler M et Al. Disordered-to-ordered transitions in assembly factors allow the complex II catalytic subunit to switch binding partners Nat Commun 2024-01-11 [PMID: 38212624]

Sharma P, Maklashina E, Voehler M et al. Disordered-to-ordered transitions in assembly factors allow the Complex II catalytic subunit to switch binding partners Research Square 2022-12-02 (WB)



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NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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