

Product Datasheet

Klotho Antibody - BSA Free NBP1-76511

Unit Size: 0.1 mg

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

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NBP1-76511

Klotho Antibody - BSA Free

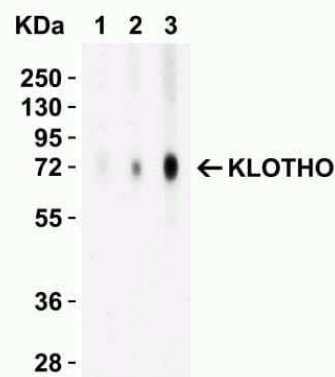
Product Information	
Unit Size	0.1 mg
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Peptide affinity purified
Buffer	PBS
Target Molecular Weight	116 kDa

Product Description	
Host	Rabbit
Gene ID	9365
Gene Symbol	KL
Species	Human, Mouse, Rat
Specificity/Sensitivity	Three isoforms of Klotho are known to exist. Human Klotho has 2 isoforms, including isoform 1 (1012aa, 116kD) and isoform 2 (549aa, 62kD). Mouse Klotho has 2 isoforms, including isoform 1 (1014aa, 116kD) and isoform 2 (550aa, 62kD). Rat Klotho has one isoform (1014aa, 117kD). NBP1-76511 can detect human, mouse and rat.
Immunogen	Antibody was raised against a peptide corresponding to 17 amino acids near the center of human Klotho. The immunogen is located within amino acids 410-460 of Klotho. Amino Acid Sequence: SGTTKRRDDAKYMYYLK

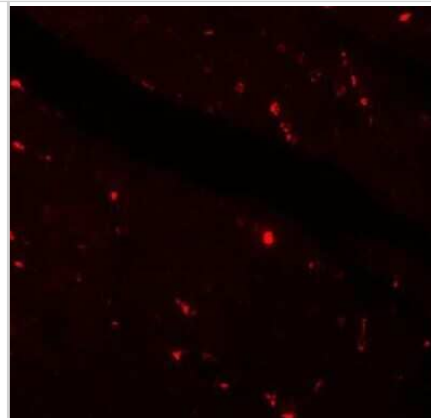
Product Application Details	
Applications	Western Blot, ELISA, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin
Recommended Dilutions	Western Blot 1-4 ug/mL, ELISA 1:100-1:2000, Immunohistochemistry 2.5 ug/mL, Immunocytochemistry/ Immunofluorescence 20 ug/mL, Immunohistochemistry-Paraffin 2.5 ug/ml

Images

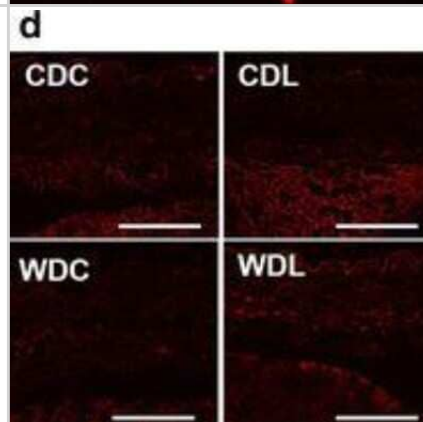
Western Blot: Klotho Antibody - BSA Free [NBP1-76511] - Western Blot Validation with Recombinant Protein. Loading: 30 ng of human KLOTHO recombinant protein per lane. Antibodies: KLOTHO NBP1-76511 (Lane 1: 1 ug/mL, Lane 2: 2 ug/mL and Lane 3: 4 ug/mL), 1h incubation at RT in 5% NFDN/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



Immunocytochemistry/Immunofluorescence: Klotho Antibody - BSA Free [NBP1-76511] - Mouse heart tissue diluted at 20 ug/ml.



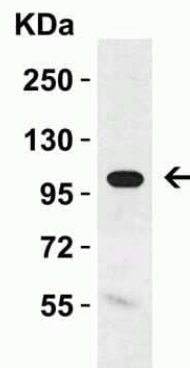
Immunohistochemistry: Klotho Antibody - BSA Free [NBP1-76511] - Endothelial klotho staining. Image collected and cropped by CiteAb from the following publication (cardiab.biomedcentral.com/articles/10.1186/s12933-016-0414-5), licensed under a CC-BY license.



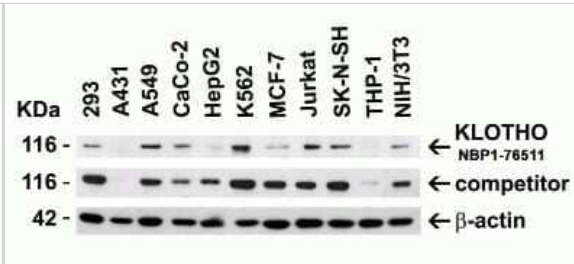
Western Blot: Klotho Antibody - BSA Free [NBP1-76511] - ARPE-19 cells were divided into the following groups: normal, hypoxia, hypoxia + AAV vector, hypoxia + digoxin, hypoxia + digoxin + nutlin-3a, hypoxia + AAV-p53 mutant infection and hypoxia + miRNA-34a inhibitor. Western blot assay of Klotho in ARPE-19 cells was performed. Image collected and cropped by CiteAb from the following publication ([//pubmed.ncbi.nlm.nih.gov/33438362/](https://pubmed.ncbi.nlm.nih.gov/33438362/)) licensed under a CC-BY license.



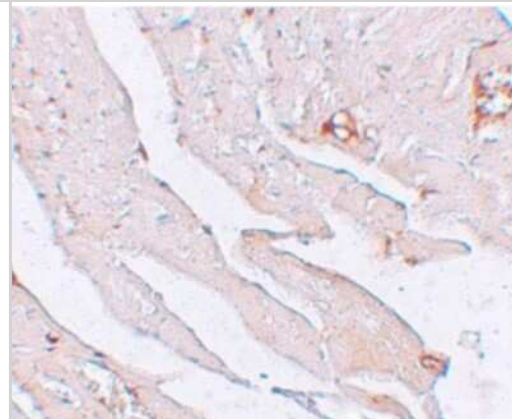
Western Blot: Klotho Antibody - BSA Free [NBP1-76511] - Validation in Rat Kidney Tissue Lysate Loading: 15ug of lysates per lane. Antibodies: KLOTHO 6107 (1ug/mL), 1h incubation at RT in 5% NFD/MTBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



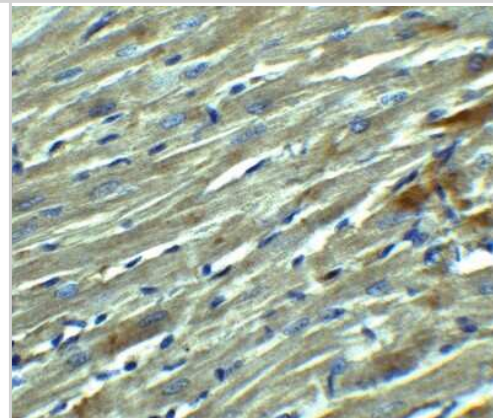
Western Blot: Klotho Antibody - BSA Free [NBP1-76511] - Independent Antibody Validation (IAV) via Protein Expression Profile in Human and Mouse Cell Lines. Loading: 15 ug of lysates per lane. Antibodies: KLOTHO NBP1-76511 (2 ug/mL), KLOTHO, competitor antibody (4 ug/mL) and beta-actin (1 ug/mL), 1h incubation at RT in 5% NFDM/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



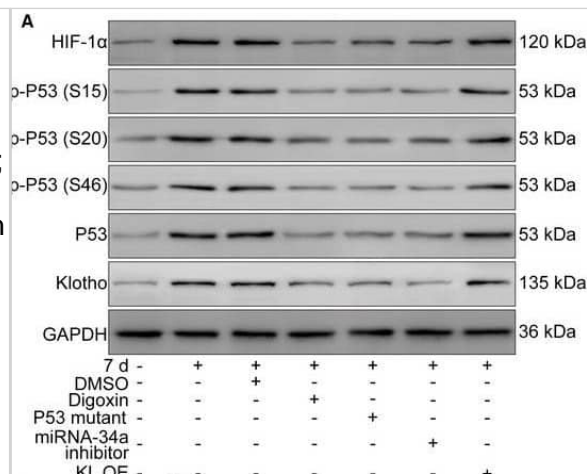
Immunohistochemistry-Paraffin: Klotho Antibody - BSA Free [NBP1-76511] - Mouse heart tissue diluted at 2.5 ug/ml.



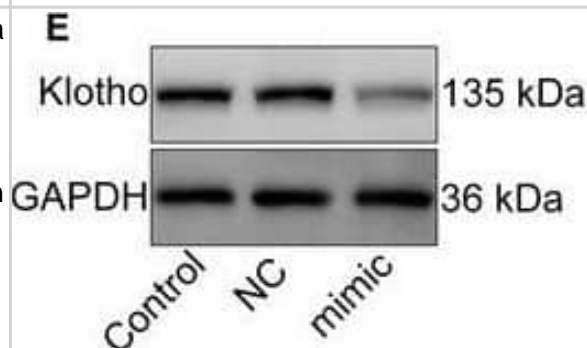
Immunohistochemistry-Paraffin: Klotho Antibody - BSA Free [NBP1-76511] - Staining of rat heart tissue with antibody at 2.5 ug/ml.



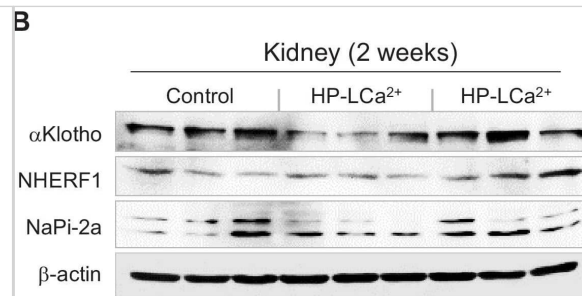
Western Blot: Klotho Antibody - BSA Free [NBP1-76511] - Blockade of the HIF-1 α /p53/miRNA-34a/Klotho axis decreases the leakage & area of mouse laser-induced CNV. The mice were divided into the following groups: normal, CNV 7 d, CNV 7 d + 0.1% DMSO, CNV 7 d + digoxin (oral; 2 mg/kg for 7 d), CNV 7 d + AAV-p53 mutant (intravitreal injection; approximately 3 μ L, 3 \times 10¹⁰ viral particles/mL), CNV 7 d + miRNA-34a inhibitor (intravitreal injection; 1 μ g) & CNV 7 d + AAV-Klotho full-length plasmid (intravitreal injection, 2 μ L, 5 \times 10¹⁰ viral particles/mL). A, Western blot was performed to measure HIF-1 α , p-p53 (S15), p53 (S20), p-p53 (S46), p53 & Klotho protein levels. B, The relative protein levels of HIF-1 α /GAPDH (B), p-p53 (S15)/p53 (C), p-p53 (S20)/p53 (D), p-p53 (S46)/p53 (E), p53/GAPDH (F) & Klotho/GAPDH (G) were analysed. ***P < .001, CNV 7 d group vs normal group. ##P < .01, compared with the CNV 7 d group. NS, CNV 7 d + KL OE group vs CNV 7 d group. H, RT-PCR was performed to measure the expression of miRNA-34a. **P < .01, CNV 7 d group vs normal group. ###P < .01, compared with the CNV 7 d group. NS, CNV 7 d + KL OE group vs CNV 7 d group. I, FFA was performed to measure the leakage of CNV. J, The leakage of CNV was analysed. K, ICGA was performed to measure the area of CNV. L, The area of CNV was analysed. **P < .01, ***P < .001, compared with the CNV 7 d group Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/33438362>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: Klotho Antibody - BSA Free [NBP1-76511] - miRNA-34a inhibits the expression of Klotho. ARPE-19 cells were divided into the following groups: normal, hypoxia, hypoxia + AAV vector, hypoxia + digoxin, hypoxia + digoxin + nutlin-3a, hypoxia + AAV-p53 mutant infection & hypoxia + miRNA-34a inhibitor. A, Western blot assay of Klotho in ARPE-19 cells was performed. B, The relative protein level of Klotho compared with the GAPDH level was analysed. ***P < .001, hypoxia group vs normal group. ####P < .001, ##P < .01, compared with the hypoxia group. %%P < .01, hypoxia + digoxin + nutlin-3a group vs hypoxia + digoxin group. C, Schematic of the Klotho 3' UTR with the WT or mutated putative-binding site of miRNA-34a inserted into a luciferase (Luc) reporter. D, qRT-PCR analysis of Klotho mRNA expression in HEK293T cells transfected with miRNA-34a mimic for 24 h. **P < .01, miRNA-34a mimic group vs control group. E, Western blot of Klotho in HEK293T cells transfected with a miRNA-34a mimic for 24 h was performed. F, Immunoblotted Klotho was quantified & normalized to GAPDH. ***P < .001, miRNA-34a mimic group vs control group. G Relative luciferase activity was detected in HEK293T cells co-transfected with plasmids containing firefly luciferase & wild-type (WT) or mutant (Mut) Klotho 3' UTR & miRNA-34a mimic for 24 h. The luciferase activity values were normalized to Renilla reniformis luciferase (TK-RL) activity. **P < .01, Luc-Klotho 3' UTR WT group vs vector group. Statistically non-significant (NS), Luc-Klotho 3' UTR mutant group vs vector group Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/33438362>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: Klotho Antibody - BSA Free [NBP1-76511] - High phytate-induced renal phosphate wasting is independent of FGF23. (A) The renal expression of downregulated genes associated with Ca²⁺ & phosphate homeostasis in rats fed control or phytate-supplemented diets (n = 8 per group). (B) Results of immunoblot analyses & protein levels of renal αKlotho, NHERF1, & NaPi-2a after 2 weeks for rats fed control, HP-LCa²⁺, & HP-HCa²⁺ diets. (C) The levels of renal proteins were quantified using ImageJ software (n = 6 per group). (D, E) Time course analysis of serum levels of intact FGF23 (D) & C-terminal FGF23 (E) in rats fed control, HP-LCa²⁺, & HP-HCa²⁺ diets. (F) Representative immunohistochemical staining of EDTA-decalcified femur sections for FGF23 from rats fed control, HP-LCa²⁺, & HP-HCa²⁺ diets. All data are presented as the mean ± SD of each group (n = 3–8 per group). *, p<0.05; **, p<0.01; ***, p<0.001, compared with controls. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/32271147>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Laiqing Xie, Ying Wang, Quan Li, Xiaoyan Ji, Yuanyuan Tu, Shu Du, Hui Lou, Xinwei Zeng, Linling Zhu, Ji Zhang, Manhui Zhu The HIF-1α/p53/miRNA-34a/Klotho axis in retinal pigment epithelial cells promotes subretinal fibrosis and exacerbates choroidal neovascularization *Journal of Cellular and Molecular Medicine* 2021-01-12 [PMID: 33438362]

Kamel SS, Baky NAA, Karkeet RM Et al. Astaxanthin extenuates the inhibition of aldehyde dehydrogenase and Klotho protein expression in cyclophosphamide-induced acute cardiomyopathic rat model *Clinical and experimental pharmacology & physiology* 2021-10-01 [PMID: 34597426] (WB, Rat)

Kim O H, Booth C J et al. High-phytate/low-calcium diet is a risk factor for crystal nephropathies, renal phosphate wasting, and bone loss. *Elife* 2020-09-04 [PMID: 32271147] (WB, Rat)

Kim OH, Booth CJ, Choi HS et al. High-phytate/low-calcium diet is a risk factor for crystal nephropathies, renal phosphate wasting, and bone loss *BioRxiv*

Manrique C, Habibi J, Aroor AR et al. Dipeptidyl peptidase-4 inhibition with linagliptin prevents western diet-induced vascular abnormalities in female mice. *Cardiovasc Diabetol* 2016-07-08 [PMID: 27391040] (ICC/IF)



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NBP2-24891	Rabbit IgG Isotype Control

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