

# Product Datasheet

## Nephrin Antibody - BSA Free

### NBP1-77303

Unit Size: 0.1 mg

Store at 4C.

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**NBP1-77303**

Nephrin Antibody - BSA Free

**Product Information**

<b>Unit Size</b>	0.1 mg
<b>Concentration</b>	1 mg/ml
<b>Storage</b>	Store at 4C.
<b>Clonality</b>	Polyclonal
<b>Preservative</b>	0.02% Sodium Azide
<b>Isotype</b>	IgG
<b>Purity</b>	Peptide affinity purified
<b>Buffer</b>	PBS

**Product Description**

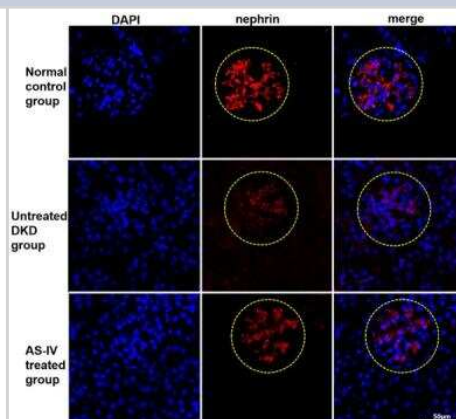
<b>Host</b>	Rabbit
<b>Gene ID</b>	4868
<b>Gene Symbol</b>	NPHS1
<b>Species</b>	Human, Mouse, Rat
<b>Specificity/Sensitivity</b>	Human Nephrin has 2 isoforms, including isoform 1 (1241aa, 135kD) and isoform 2 (1201aa, 131kD). Mouse Nephrin also has 2 isoforms, including isoform 1 (1256aa, 136kD) and isoform 2 (1242aa, 135kD). Rat Nephrin has 3 isoforms, including isoform 1 (1252aa, 136kD), isoform 2 (1239aa, 135kD) and isoform 3 (1166aa, 127kD). NBP1-77303 can detect isoforms of human, mouse and rat.
<b>Immunogen</b>	Antibody was raised against a peptide corresponding to 14 amino acids near the carboxy terminus of human Nephrin. The immunogen is located within the last 50 amino acids of Nephrin. Amino Acid Sequence: EPDSLFPFELRGHLV

**Product Application Details**

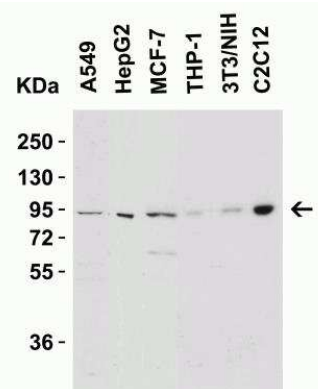
<b>Applications</b>	Western Blot, ELISA, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin
<b>Recommended Dilutions</b>	Western Blot 1-2 ug/ml, ELISA 1:100-1:2000, Immunohistochemistry 1-5 ug/ml, Immunocytochemistry/ Immunofluorescence 10-20 ug/ml, Immunohistochemistry-Paraffin 1-5 ug/ml

**Images**

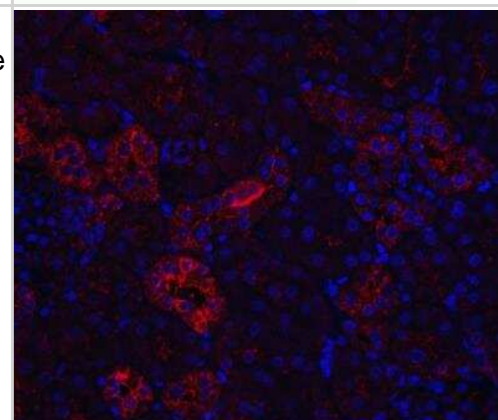
Immunocytochemistry/Immunofluorescence: Nephrin Antibody - BSA Free [NBP1-77303] - Nephrin Antibody [NBP1-77303] - In vivo AS-IV effects on podocyte EMT. Nephrin levels were analyzed by immunofluorescence assay. Image collected and cropped by CiteAb from the following publication (<https://www.nature.com/articles/s41598-018-36911-1>) licensed under a CC-BY license.



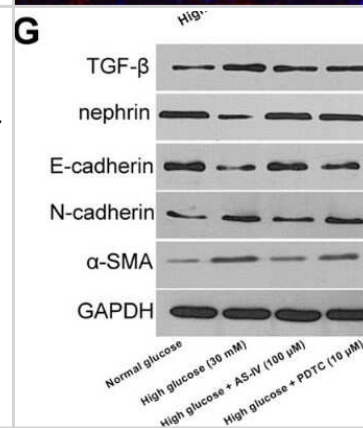
Western Blot: Nephrin Antibody - BSA Free [NBP1-77303] - Nephrin Antibody [NBP1-77303] - Loading: 15 ug of lysates per lane. Antibodies: Nephrin (2 ug/mL), 1h incubation at RT in 5% NFDM/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



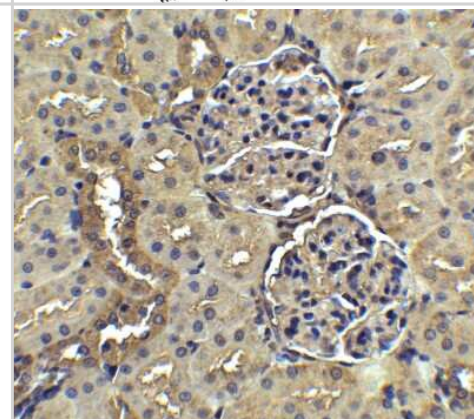
Immunocytochemistry/Immunofluorescence: Nephrin Antibody - BSA Free [NBP1-77303] - Nephrin Antibody [NBP1-77303] - Rat kidney tissue with Nephrin antibody at 20 ug/mL.



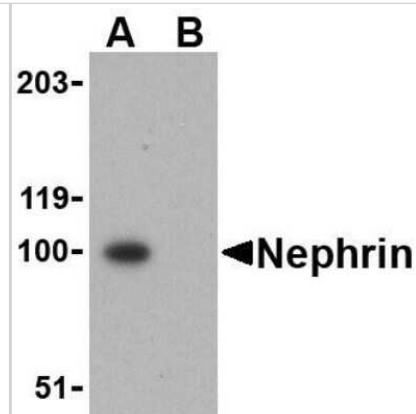
Western Blot: Nephrin Antibody - BSA Free [NBP1-77303] - Nephrin Antibody [NBP1-77303] - In vitro AS-IV effects on SIRT1 and NF- $\kappa$ B p65 expression in hyperglycaemia-triggered podocyte EMT. Podocytes were pretreated with high glucose for 1 hour, and then incubated with PDTC or AS-IV for 48 hours. The levels of TGF- $\beta$ , nephrin, E-cadherin, N-cadherin and  $\alpha$ -SMA were quantified with Western blotting. Data is presented as meanSD. n=3. \*Compared with normal glucose cohort, or high glucose plus AS-IV cohort, or high glucose plus PDTC cohort, P < 0.05. Astragaloside IV inhibits glucose-induced epithelial-mesenchymal transition of podocytes through autophagy enhancement via the SIRT-NF- $\kappa$ B p65 axis. Sci Rep (2019)



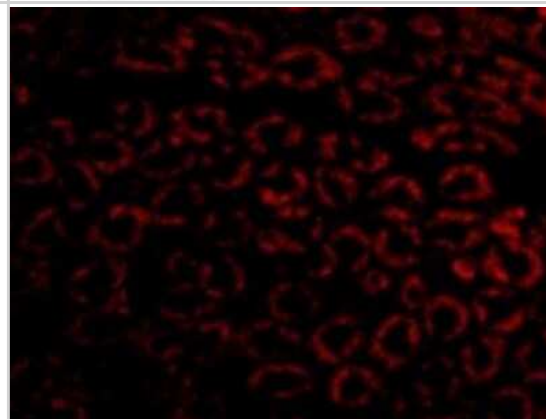
Immunohistochemistry: Nephrin Antibody - BSA Free [NBP1-77303] - Nephrin Antibody [NBP1-77303] - Staining of rat kidney tissue with antibody at 5 ug/mL.



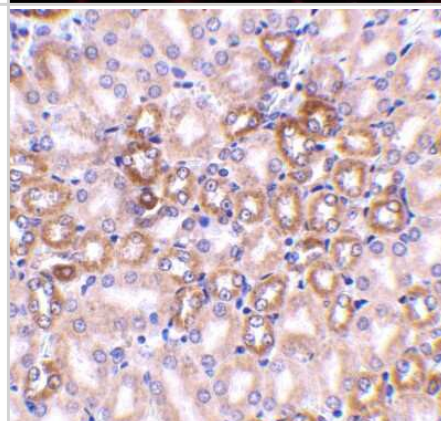
Western Blot: Nephrin Antibody - BSA Free [NBP1-77303] - Nephrin Antibody [NBP1-77303] - Mouse kidney tissue lysate with Nephrin antibody at 1 u/mL in the (A) absence and (B) presence of blocking peptide.



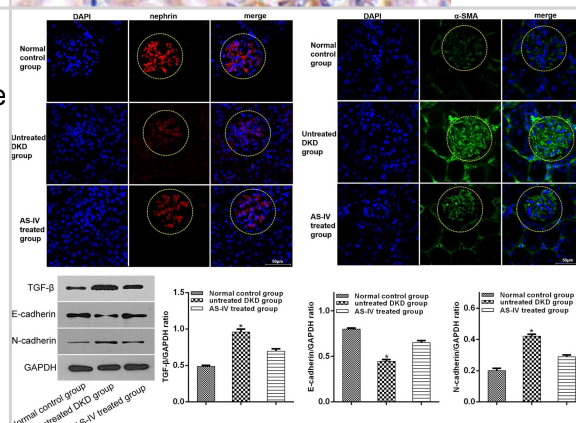
Immunocytochemistry/Immunofluorescence: Nephrin Antibody - BSA Free [NBP1-77303] - Nephrin Antibody [NBP1-77303] - Mouse Kidney cells with Nephrin antibody at 10 ug/mL.



Immunohistochemistry-Paraffin: Nephrin Antibody - BSA Free [NBP1-77303] - Nephrin Antibody [NBP1-77303] - Mouse kidney tissue with Nephrin antibody at 1 ug/mL.

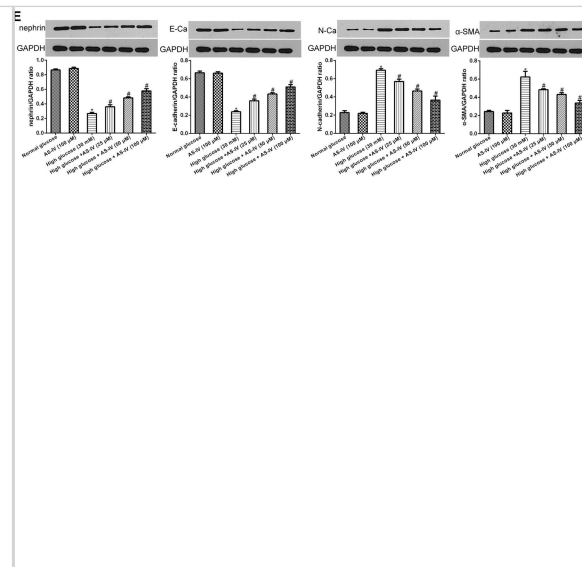


Immunocytochemistry/ Immunofluorescence: Nephrin Antibody - BSA Free [NBP1-77303] - In vivo AS-IV effects on podocyte EMT.  $\alpha$ -SMA & nephrin levels in vivo were analyzed by immunofluorescence assay & the levels of TGF- $\beta$ , N-cadherin & E-cadherin were quantified using Western blotting. Data is presented as mean  $\pm$  SD.  $n = 3$ . \*Compared with normal control cohort, or AS-IV treated cohort,  $P < 0.05$ . Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30674969>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

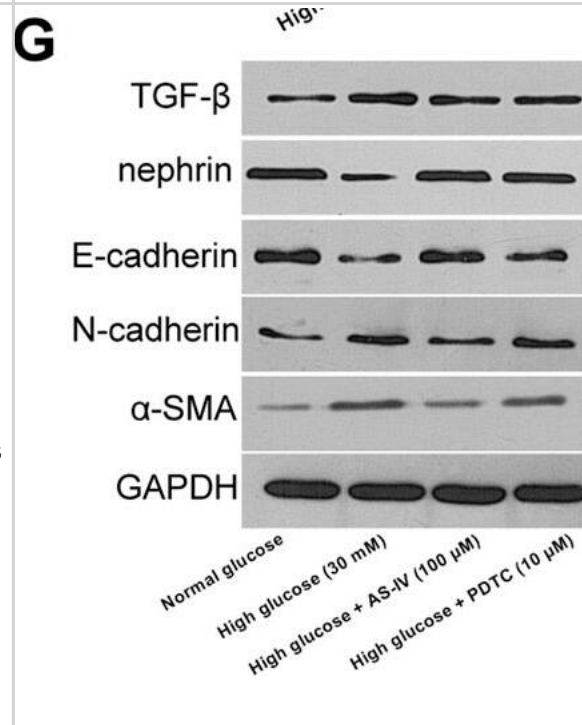




**Western Blot: Nephrin Antibody - BSA Free [NBP1-77303] - AS-IV effects on hyperglycaemia-triggered podocyte EMT.** (A) AS-IV chemical structure. (B–E) Podocytes were pretreated with high/normal glucose for 1 hour, & then incubated with or without AS-IV (25, 50 & 100  $\mu$ M) for 48 hours. (B) mRNA expression levels of TGF- $\beta$  were detected using real-time PCR. (C) TGF- $\beta$  protein levels were quantified using Western blotting. (D) mRNA expression levels of  $\alpha$ -SMA, N-cadherin, E-cadherin & nephrin were detected using real-time PCR. (E) Protein levels of  $\alpha$ -SMA, N-cadherin, E-cadherin & nephrin were detected using Western blotting. Note: E-Ca, E-cadherin; N-Ca, N-cadherin. The molecular weight of the proteins: TGF- $\beta$ , 44 kDa; nephrin, 100 kDa; E-cadherin, 110 kDa; N-cadherin, 100 kDa;  $\alpha$ -SMA, 42 kDa. Data is presented as mean  $\pm$  SD. n = 3. \*Compared with normal glucose cohort or AS-IV cohort, P < 0.05; #compared with high glucose cohort, P < 0.05. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30674969>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



**Western Blot: Nephrin Antibody - BSA Free [NBP1-77303] - In vitro AS-IV effects on SIRT1 & NF- $\kappa$ B p65 expression in hyperglycaemia-triggered podocyte EMT.** (A–F) Podocytes were exposed to either a SIRT1 inhibitor EX527 or SIRT1 activator SRT1720 after a 1 hour exposure to hyperglycaemic conditions, & were subsequently incubated with or without AS-IV (100  $\mu$ M) for 48 hours. (A,E) mRNA expression levels of SIRT1 and p65 were quantified using real-time PCR. (B) The deacetylase activity of SIRT1 was detected with a SIRT1 activity assay. (C,D,F) The protein levels of SIRT1 & AC-p65 were quantified using Western blotting. The molecular weight of the proteins: SIRT1, 110 kDa; AC-p65, 65 kDa; p65, 65 kDa. Data is presented as mean  $\pm$  SD. n = 3. \*Compared with normal glucose cohort, or AS-IV cohort, or high glucose plus AS-IV cohort, or high glucose plus SRT1720 cohort, P < 0.05; #compared with high glucose plus AS-IV cohort, P < 0.05. (G) Podocytes were pretreated with high glucose for 1 hour, & then incubated with PDTC or AS-IV for 48 hours. The levels of TGF- $\beta$ , nephrin, E-cadherin, N-cadherin &  $\alpha$ -SMA were quantified with Western blotting. Data is presented as mean  $\pm$  SD. n = 3. \*Compared with normal glucose cohort, or high glucose plus AS-IV cohort, or high glucose plus PDTC cohort, P < 0.05. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30674969>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Nishad R, Tahaseen V, Kavvuri R et al. Advanced-Glycation End-Products Induce Podocyte Injury and Contribute to Proteinuria *Frontiers in Medicine* 2021-07-01 [PMID: 34277660]

Pasupulati A, Nishad R, Mukhi D et al. Growth hormone induces TNF-alpha in podocytes and contributes to monocyte-to-macrophage differentiation: Implications in Diabetic kidney disease *Research Square* 2022-02-02 (WB, Human)

Wang X, Gao Y, Yi W et al. Inhibition of miRNA-155 Alleviates High Glucose-Induced Podocyte Inflammation by Targeting SIRT1 in Diabetic Mice *Journal of diabetes research* 2021-03-08 [PMID: 33748285] (IHC-P, Mouse)

Wang X, Gao Y, Tian N et al. Astragaloside IV inhibits glucose-induced epithelial-mesenchymal transition of podocytes through autophagy enhancement via the SIRT-NF-kB p65 axis. *Sci Rep* 2019-01-23 [PMID: 30674969] (IHC-P, Mouse)

Shukla R, Pandey N, Banerjee S, Tripathi, YB. Effect of extract of *Pueraria tuberosa* on expression of hypoxia inducible factor-1alpha and vascular endothelial growth factor in kidney of diabetic rats. *Biomed. Pharmacother.* 2017-06-22 [PMID: 28648975]

Motiram Kakalij R, Tejaswini G, Patil MA et al. Vanillic Acid Ameliorates Cationic Bovine Serum Albumin Induced Immune Complex Glomerulonephritis in BALB/c Mice. *Drug Dev. Res.* 2016-04-30 [PMID: 27130149] (IHC-P, Mouse)





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### **Products Related to NBP1-77303**

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NBP1-77303PEP	Nephrin 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

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### **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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