

For Research Use Only

NOX4 Monoclonal antibody

Catalog Number: 67681-1-Ig **3 Publications**



Basic Information

| | | |
|---|--|---|
| Catalog Number: 67681-1-Ig | GenBank Accession Number: BC040105 | Purification Method: Protein A purification |
| Size: 150ul, Concentration: 3520 µg/ml by Nanodrop and 1000 µg/ml by Bradford method using BSA as the standard; | GeneID (NCBI): 50507 | CloneNo.: 4E5F1 |
| Source: Mouse | Full Name: NADPH oxidase 4 | Recommended Dilutions: WB 1:1000-1:4000 IHC 1:50-1:500 IF 1:200-1:800 |
| Isotype: IgG1 | Calculated MW: 67 kDa | |
| Immunogen Catalog Number: AG6176 | Observed MW: 67 kDa | |

Applications

| | |
|--|---|
| Tested Applications: IF, IHC, WB, ELISA | Positive Controls: WB : HEK-293 cells, Jurkat cells, U-87 MG cells, HSC-T6 cells, HepG2 cells, HeLa cells |
| Cited Applications: IF, WB | IHC : human kidney tissue, |
| Species Specificity: Human, rat | IF : HUVEC cells, |
| Cited Species: human, rat | |
| Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0 | |

Background Information

NOX4 (NADPH oxidase 4) is a phagocyte-type oxidase, similar to that responsible for the production of large amounts of reactive oxygen species (ROS) in neutrophil granulocytes with resultant antimicrobial activity and it has been postulated to function in the kidney as an oxygen sensor that regulates the synthesis of erythropoietin in the renal cortex. Studies have reported molecular masses of Nox4 protein by western blot analysis ranging from 55 to 80 kDa. The truncated NOX4 splice variant D (28 kDa) lacks the majority of the transmembrane domain and has been shown to produce higher levels of ROS and DNA damage compared to its prototype. NOX4D has previously been shown to localise to the nucleus and nucleolus in various cell types and is implicated in the generation of reactive oxygen species (ROS) and DNA damage (PMID: 11728818, PMID: 29285262, PMID: 14670934). Nox4 in cardiac myocytes is primarily expressed in mitochondria, and upregulation of Nox4 induced by hypertrophic stimuli elicits mitochondrial dysfunction and cardiac failure. In breast or ovarian tumor cells, mitochondrial Nox4 contributes to oncogenesis. In vascular endothelial cells, however, Nox4 is expressed in the endoplasmic reticulum (ER) and plays a specific role in redox-mediated ER signaling (PMID: 24259511).

Notable Publications

| Author | Pubmed ID | Journal | Application |
|--------------|-----------|----------------------|-------------|
| Mazhar Pasha | 35883766 | Antioxidants (Basel) | WB |
| Weixi Xie | 38001778 | Antioxidants (Basel) | IF |
| Hui-Zhou Li | 37626693 | Biomedicines | WB |

Storage

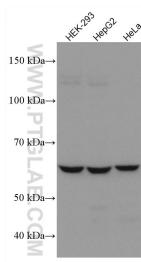
Storage:
Store at -20°C.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

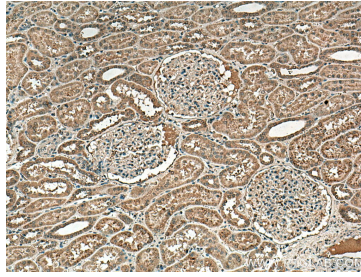
For technical support and original validation data for this product please contact:
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E: proteintech@ptglab.com
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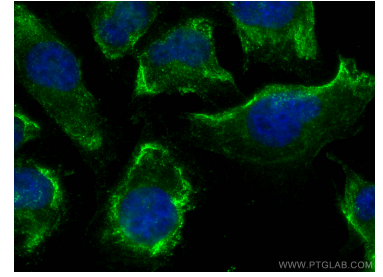
Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 67681-1-Ig (NOX4 antibody) at dilution of 1:2000 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded human kidney tissue slide using 67681-1-Ig (NOX4 antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed HUVEC cells using NOX4 antibody (67681-1-Ig, Clone: 4E5F1) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).