Anti-TXNRD2 Antibody [PSH02-26] - BSA and Azide free

HA750794

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IF-Tissue
Molecular Wt:	Predicted band size: 57 kDa
Clone number:	PSH02-26

Description: The protein encoded by this gene belongs to the pyridine nucleotide-disulfide oxidoreductase family, and is a member of the thioredoxin (Trx) system. Three thioredoxin reductase (TrxR) isozymes are found in mammals. TrxRs are selenocysteine-containing flavoenzymes, which reduce thioredoxins, as well as other substrates, and play a key role in redox homoeostasis. This gene encodes a mitochondrial form important for scavenging reactive oxygen species in mitochondria. It functions as a homodimer containing FAD, and selenocysteine (Sec) at the active site. Sec is encoded by UGA codon that normally signals translation termination. The 3' UTRs of selenoprotein mRNAs contain a conserved stem-loop structure, the Sec insertion sequence (SECIS) element, which is necessary for the recognition of UGA as a Sec codon rather than as a stop signal. Alternatively spliced transcript variants encoding different isoforms, including a few localized in the cytosol and some lacking the C-terminal Sec residue, have been found for this gene.

Immunogen: Recombinant protein within human TXNRD2 aa 1-524 / 524.

Positive control: HEK-293 cell lysate, HeLa cell lysate, A431 cell lysate, K-562 cell lysate, mouse heart tissue lysate, rat heart tissue lysate, mouse liver tissue lysate, rat liver tissue lysate, human kidney tissue lysate, mouse kidney tissue lysate, rat kidney tissue lysate, human prostate tissue, human liver tissue, mouse liver tissue, rat liver tissue.

Subcellular location: Mitochondrion.

Database links: SwissProt: Q9NNW7 Human | Q9JLT4 Mouse | Q9Z0J5 Rat

Recommended Dilutions:

WB	1:1,000
IHC-P	1:200-1:1,000
IF-Tissue	1:50

Storage Buffer: 1*PBS (pH7.4).

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

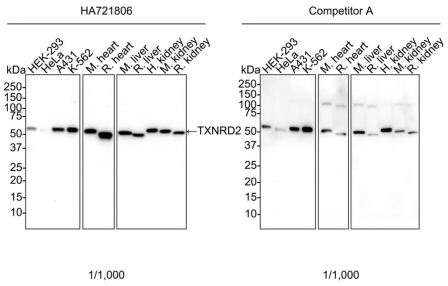

Fig1: Western blot analysis of TXNRD2 on different lysates with Rabbit anti-TXNRD2 antibody (HA750794) at 1/1,000 dilution and competitor's antibody at 1/1,000 dilution.

Lane 1: HEK-293 cell lysate (20 µg/Lane)
Lane 2: HeLa cell lysate (20 µg/Lane)
Lane 3: A431 cell lysate (20 µg/Lane)
Lane 4: K-562 cell lysate (20 µg/Lane)
Lane 5: Mouse heart tissue lysate (40 µg/Lane)
Lane 6: Rat heart tissue lysate (40 µg/Lane)
Lane 7: Mouse liver tissue lysate (40 µg/Lane)
Lane 8: Rat liver tissue lysate (40 µg/Lane)
Lane 9: Human kidney tissue lysate (40 µg/Lane)
Lane 10: Mouse kidney tissue lysate (40 µg/Lane)
Lane 11: Rat kidney tissue lysate (40 µg/Lane)

Predicted band size: 57 kDa
Observed band size: 57 kDa

Exposure time: 3 minutes; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA750794) at 1/1,000 dilution and competitor's antibody at 1/1,000 dilution were used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

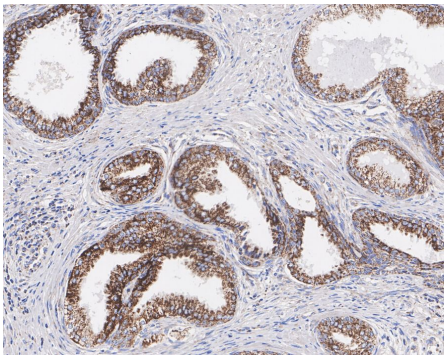

Fig2: Immunohistochemical analysis of paraffin-embedded human prostate tissue with Rabbit anti-TXNRD2 antibody (HA750794) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750794) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

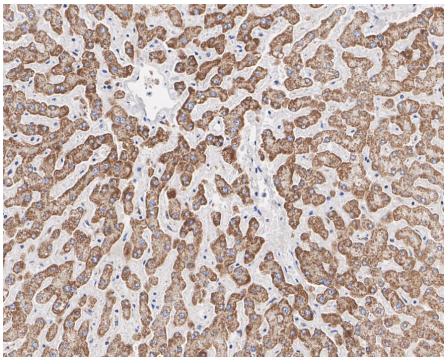

Fig3: Immunohistochemical analysis of paraffin-embedded human liver tissue with Rabbit anti-TXNRD2 antibody (HA750794) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750794) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

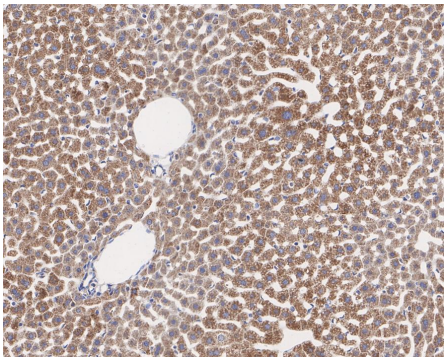

Fig4: Immunohistochemical analysis of paraffin-embedded mouse liver tissue with Rabbit anti-TXNRD2 antibody (HA750794) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750794) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

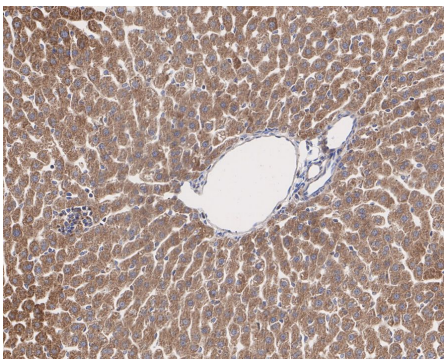

Fig5: Immunohistochemical analysis of paraffin-embedded rat liver tissue with Rabbit anti-TXNRD2 antibody (HA750794) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750794) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

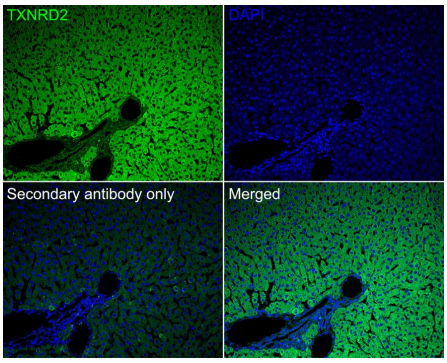

Fig6: Immunofluorescence analysis of paraffin-embedded rat liver tissue labeling TXNRD2 with Rabbit anti-TXNRD2 antibody (HA750794) at 1/50 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary antibody (HA750794, green) at 1/50 dilution overnight at 4 ℃, washed with PBS. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. Nuclei were counterstained with DAPI (blue).

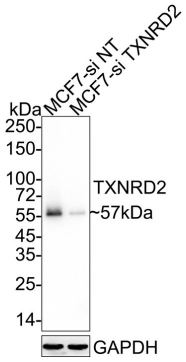

Fig7: Western blot analysis of TXNRD2 on different lysates with Rabbit anti-TXNRD2 antibody (HA750794) at 1/1,000 dilution.

Lane 1: MCF7-si NT cell lysate
Lane 2: MCF7-si TXNRD2 cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 57 kDa
Observed band size: 57 kDa

Exposure time: 16 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA750794) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Aboobakar IF et al. Mitochondrial TXNRD2 and ME3 Genetic Risk Scores Are Associated with Specific Primary Open-Angle Glaucoma Phenotypes. Ophthalmology. 2023 Jul
2. Kondkar AA et al. Lack of Association Between Polymorphisms in TXNRD2 and LMX1B and Primary Open-Angle Glaucoma in a Saudi Cohort. Front Genet. 2021 Aug