

Product Name: KD-Validated Thioredoxin Reductase 2 Recombinant Rabbit Monoclonal Antibody

Catalog #: KVA01155

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC
Reactivity	Human
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000
Molecular Weight	Calculated MW: 56.5kDa

Antigen Information

Gene Name	TXNRD2
Alternative Names	TXNRD2; Thioredoxin Reductase 2; TRXR2; Selenoprotein Z; SELZ; TR3; TR; Thioredoxin Reductase 2, Mitochondrial; Thioredoxin Reductase Beta; Thioredoxin Reductase TR3; EC 1.8.1.9 4; TXNR2; Thioredoxin Reductase 3; KIAA1652; EC 1.8.1; TR-BETA; TR-Beta; GCCD5; SelZ
Gene ID	10587.0
SwissProt ID	Q9NNW7
Immunogen	A synthesized peptide derived from human TXNRD2

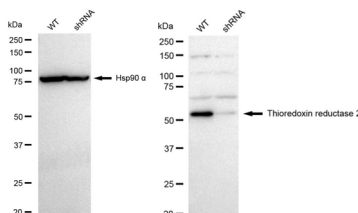
Background

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 homeostasis. 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. [provided by RefSeq, Jun 2017]

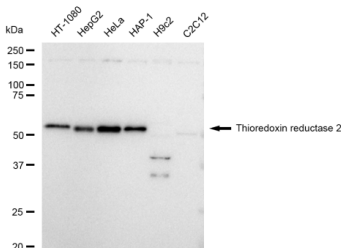
Research Area

Cell Biology, Metabolism

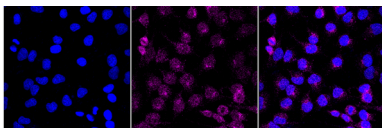
Image Data



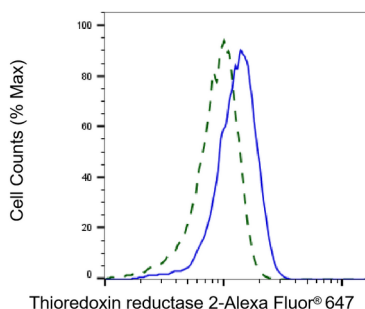
Western blotting analysis using thioredoxin reductase 2 antibody (KVA01155). Thioredoxin reductase 2 expression in wild type (WT) and thioredoxin reductase 2 (PFKFB3) shRNA knockdown (KD) HT-1080 cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with thioredoxin reductase 2 antibody (KVA01155, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



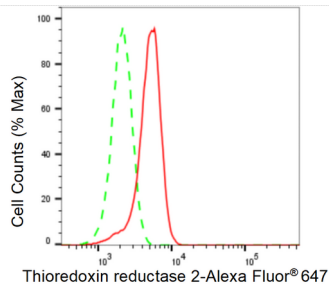
Western blotting analysis using Thioredoxin reductase 2 antibody (KVA01155). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with Thioredoxin reductase 2 antibody (KVA01155, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



Immunocytochemical staining of HeLa cells with Thioredoxin reductase 2 antibody (KVA01155, 1:1,000). Nuclei were stained blue with DAPI; Thioredoxin reductase 2 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.



Validation of Thioredoxin reductase 2 knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HT-1080 cells were stained with Thioredoxin reductase 2 antibody (KVA01155, 1:2,000) and analyzed using BD flow cytometer.



Flow cytometric analysis of Thioredoxin reductase 2 expression in HeLa cells using Thioredoxin reductase 2 antibody (KVA01155, 1:2,000). Green, isotype control; red, Thioredoxin reductase 2.