



TXNRD1 Rabbit mAb

Catalog No	YP-rAb-17013
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IHC,IF,IP,ELISA
Gene Name	TXNRD1 GRIM12 KDRF
Protein Name	Thioredoxin reductase 1, cytoplasmic (TR) (Gene associated with retinoic and interferon-induced mortality 12 protein) (GRIM-12) (Gene associated with retinoic and IFN-induced mortality 12 protein) (KM-102-derived reductase-like factor) (Thioredoxin reductase TR1)
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:200-1:1000; WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; IP 1:50-1:200; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15° C to -25° C/1 year(Do not lower than -25° C)
Synonyms	
Observed Band	60kD
Calculated Molecular Weight	67kD
Cell Pathway	[Isoform 1]: Cytoplasm .; [Isoform 4]: Cytoplasm . Nucleus .; [Isoform 5]: Cytoplasm .
Tissue Specificity	[Isoform 1]: Expressed predominantly in Leydig cells (at protein level). Also expressed in ovary, spleen, heart, liver, kidney and pancreas and in a number of cancer cell lines. ; [Isoform 4]: Widely expressed with highest levels in kidney, testis, uterus, ovary, prostate, placenta and fetal liver.
Function	Catalytic activity:Thioredoxin + NADP(+) = thioredoxin disulfide + NADPH.,cofactor:Binds 1 FAD per subunit.,Domain:The N-terminal glutaredoxin domain found in isoform 1 does not contain the C-P-Y-C redox-active motif normally found in glutaredoxins and has been found to be inactive in classical glutaredoxin assays.,Function:Isoform 1 may possess glutaredoxin activity as well as thioredoxin reductase activity and induces actin and tubulin polymerization, leading to formation of cell membrane protrusions. Isoform 4 enhances the transcriptional activity of estrogen receptors alpha and beta while isoform 5





enhances the transcriptional activity of the beta receptor only. Isoform 5 also mediates cell death induced by a combination of interferon-beta and retinoic acid.,induction:Isoform 5 is induced by a combination of interferon-beta and retinoic acid (at protein level). Isoform 1 is induced by estradiol or testosterone in HeLa cells.,miscellaneous:The thioredoxin reductase active site is a redox-active disulfide bond. The selenocysteine residue is also essential for catalytic activity.,PTM:The N-terminus of isoform 5 is blocked.,sequence
Caution:Translated as Sec.,similarity:Belongs to the class-I pyridine nucleotide-disulfide oxidoreductase family.,similarity:Contains 1 glutaredoxin domain.,subunit:Homodimer. Isoform 4 interacts with ESR1 and ESR2.,tissue specificity:Isoform 1 is expressed predominantly in Leydig cells (at protein level). Also expressed in ovary, spleen, heart, liver, kidney and pancreas and in a number of cancer cell lines. Isoform 4 is widely expressed with highest levels in kidney, testis, uterus, ovary, prostate, placenta and fetal liver.,

Background

thioredoxin reductase 1(TXNRD1) Homo sapiens This gene encodes a member of the family of pyridine nucleotide oxidoreductases. This protein reduces thioredoxins as well as other substrates, and plays a role in selenium metabolism and protection against oxidative stress. The functional enzyme is thought to be a homodimer which uses FAD as a cofactor. Each subunit contains a selenocysteine (Sec) residue which is required for catalytic activity. The selenocysteine is encoded by the UGA codon that normally signals translation termination. The 3' UTR of selenocysteine-containing genes have a common stem-loop structure, the sec insertion sequence (SECIS), that is necessary for the recognition of UGA as a Sec codon rather than as a stop signal. Alternative splicing results in several transcript variants encoding the same or different isoforms. [provided by RefSeq, Jul 2008],

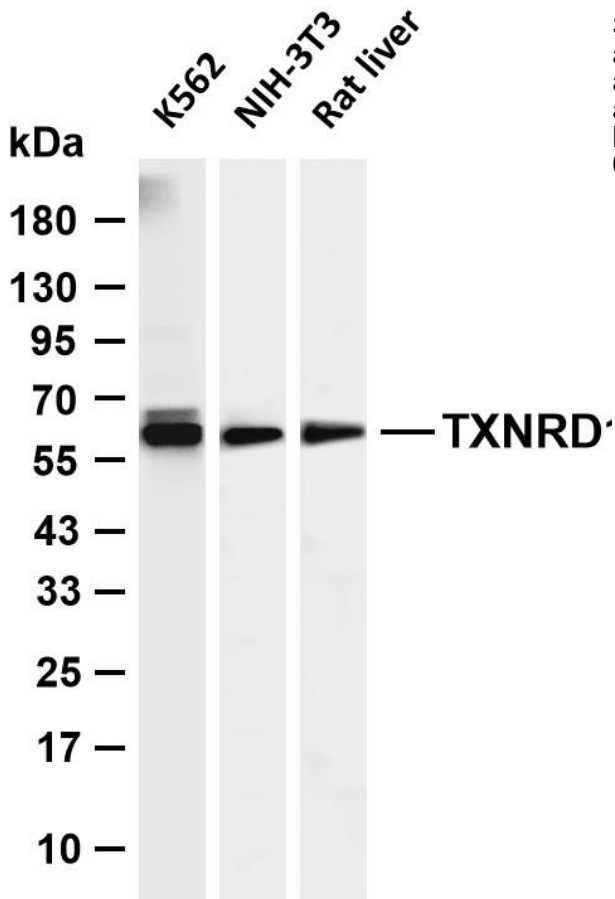
matters needing attention

Avoid repeated freezing and thawing!

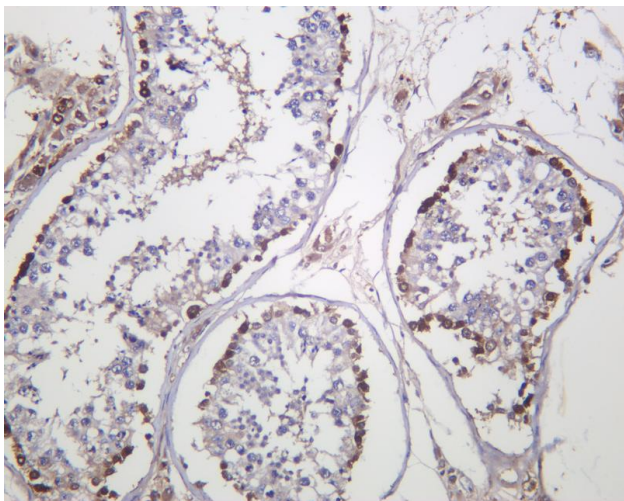
Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.





Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-TXNRD1 antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: K562 Lane 2: NIH-3T3 Lane 3: Rat liver Predicted band size: 67kDa Observed band size: 60kDa



Human testis was stained with anti-TXNRD1 Rabbit antibody

