

## Product datasheet for **TR317761**

### TXNRD3 Human shRNA Plasmid Kit (Locus ID 114112)

#### Product data:

Product Type:	shRNA Plasmids
Product Name:	TXNRD3 Human shRNA Plasmid Kit (Locus ID 114112)
Locus ID:	114112
Synonyms:	TGR; TR2; TR2IT1; TRXR3; TXNRD3IT1; TXNRD3NB; TXNRD3NT1
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	TXNRD3 - Human, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 114112). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	<a href="#">NM_001173513</a> , <a href="#">NM_052883</a> , <a href="#">NM_001173513.1</a> , <a href="#">NM_052883.1</a> , <a href="#">BC030028</a> , <a href="#">BC050032</a>
UniProt ID:	<a href="#">Q86VQ6</a>
Summary:	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 the third TrxR, which unlike the other two isozymes, contains an additional N-terminal glutaredoxin (Grx) domain, and shows highest expression in testis. The Grx domain allows this isozyme to participate in both Trx and glutathione systems. 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 have been found for this gene. Experimental evidence suggests the use of a non-AUG (CUG) codon as a translation initiation codon (PMID:20018845). [provided by RefSeq, Aug 2017]


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**shRNA Design:** These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact [techsupport@origene.com](mailto:techsupport@origene.com). If you need a special design or shRNA sequence, please utilize our [custom shRNA service](#).

**Performance Guaranteed:** OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.

For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at [techsupport@origene.com](mailto:techsupport@origene.com). Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).