

TXNDC4 Protein, Human (HEK293, His)

Cat. No.:	HY-P70901
Synonyms:	Thioredoxin domain-containing protein 4; ER protein 44; KIAA0573; TXNDC4
Species:	Human
Source:	HEK293
Accession:	Q9BS26 (E30-D402)
Gene ID:	23071
Molecular Weight:	Approximately 50.0 kDa

PROPERTIES

AA Sequence	<pre> E I T S L D T E N I D E I L N N A D V A L V N F Y A D W C R F S Q M L H P I F E E A S D V I K E E F P N E N Q V V F A R V D C D Q H S D I A Q R Y R I S K Y P T L K L F R N G M M M K R E Y R G Q R S V K A L A D Y I R Q Q K S D P I Q E I R D L A E I T T L D R S K R N I I G Y F E Q K D S D N Y R V F E R V A N I L H D D C A F L S A F G D V S K P E R Y S G D N I I Y K P P G H S A P D M V Y L G A M T N F D V T Y N W I Q D K C V P L V R E I T F E N G E E L T E E G L P F L I L F H M K E D T E S L E I F Q N E V A R Q L I S E K G T I N F L H A D C D K F R H P L L H I Q K T P A D C P V I A I D S F R H M Y V F G D F K D V L I P G K L K Q F V F D L H S G K L H R E F H H G P D P T D T A P G E Q A Q D V A S S P P E S S F Q K L A P S E Y R Y T L L R D </pre>
Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of 20 mM Tris-HCl, 10% Glycerol, pH 7.5.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	TXNDC4 Protein plays a pivotal role in cellular processes by mediating thiol-dependent retention in the early secretory pathway, forming mixed disulfides with substrate proteins through its conserved CRFS motif. This interaction is integral to the control of oxidative protein folding in the endoplasmic reticulum, highlighting TXNDC4's involvement in maintaining
-------------------	---

cellular redox balance. Notably, the protein inhibits the calcium channel activity of ITPR1 and is required for the retention of ERO1A and ERO1B in the endoplasmic reticulum. TXNDC4 forms mixed disulfides with both ERO1A and ERO1B, as well as cargo folding intermediates, contributing to their retention in the endoplasmic reticulum. Furthermore, the direct interaction with ITPR1 occurs in a pH-, redox state-, and calcium-dependent manner, with the strength of this interaction inversely correlating with calcium concentration. The multifaceted role of TXNDC4 underscores its significance in cellular homeostasis, particularly in regulating protein folding and redox dynamics within the secretory pathway.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA