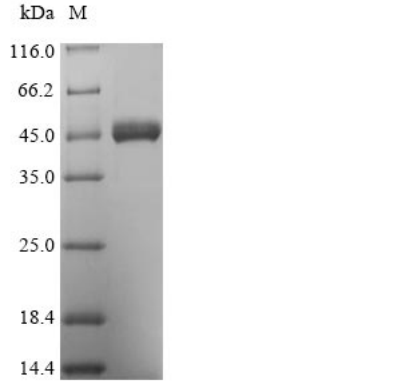
Recombinant Mouse Thioredoxin-interacting protein (Txnip)

Product Code	CSB-YP803849MO
Relevance	May act as an oxidative stress mediator by inhibiting thioredoxin activity or by limiting its bioavailability. Interacts with COPS5 and restores COPS5-induced suppression of CDKN1B stability, blocking the COPS5-mediated translocation of CDKN1B from the nucleus to the cytoplasm. Inhibits the proteasomal degradation of DDIT4, and thereby contributes to the inhibition of the mammalian target of rapamycin complex 1 (mTORC1) . Functions as a transcriptional repressor, possibly by acting as a bridge molecule between transcription factors and corepressor complexes, and over-expression will induce G0/G1 cell cycle arrest. Required for the maturation of natural killer cells. Acts as a suppressor of tumor cell growth.
Abbreviation	Txnip
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q8BG60
Alias	Vitamin D3 up-regulated protein 1
Product Type	Recombinant Protein
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MVMFKKIKSFEVVFNDPEKVYGSGEKVAGRVIVEVCEVTRVKAVRILACGVAK VLWMQGSQQCKQTLDYLRYEDTLLLEEQPTAGENEMVIMRPGNKYEYKFGFE LPQGPLGTSFKGKYGCVDYWVKAFLDRPSQPTQEAKKNFEVMDLVDVNTPDL MAPVSAKKEKKVSCMFIPDGRVSVSARIDRKGFCEGDDISIHADFENTCSRIVV PKAAIVARHTYLANGQTKVFTQKLSSVRGNHIISGTCASWRGKSLRVQKIRPSI LGCNILKVEYSLLIYVSVPGSKKVILDLPLVIGSRSGLSSRTSSMASRTSSEMSW IDLNIPDTPEAPPCYMDIIPEDHRLESPTTPLLDDVDDSQDSPIFMYAPEFQFMP PPTYTEVDPCVLNNNNNNNNVQ
Lead Time	3-7 business days
Research Area	Others
Source	Yeast
Gene Names	Txnip
Protein Names	Recommended name: Thioredoxin-interacting protein Alternative name(s): Vitamin D3 up-regulated protein 1
Expression Region	1-397aa

Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	46.4kDa
Protein Description	Full Length

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The production of this Recombinant Mouse Txnip protein required the insertion of a DNA fragment (Txnip, 1-397aa) into the plasmid vector and the transferral of this vector into Yeast cells (the step of transformation). The cells were then cultured and induced to express the Txnip protein. This recombinant protein was fused with N-terminal 6xHis tag. Its purity is 90%+ determined by SDS-PAGE.

Txnip (Txnip or Vdup1) is a gene providing an instruction of making a protein named thioredoxin-interacting protein (Txnip) in mus musculus (mouse). This gene has many orthologs in multiple mammals, such as human, norway rat, pig, cattle, etc. The protein encoded by this gene is also known as vitamin D3 up-regulated protein 1 and belongs to arrestin family.Txnip protein inhibits the antioxidative function of thioredoxin by its enzyme inhibitor activity and leads to the accumulation of reactive oxygen species and cellular stress. This protein is involved multiple biological processes, including cell cycle, cellular response to tumor cell, response to oxidative stress, etc.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.