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TXNIP Antibody
Catalog # ASC11842

Specification

TXNIP Antibody - Product Information

Application	**WB**
Primary Accession	Q9H3M7
Other Accession	NP_006463, 171184421
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 43 kDa** **Observed: 39 kDa KDa**
Application Notes	**TXNIP body can be used for detection of TXNIP by Western blot at 0.5 - 1 µg/ml.**

TXNIP Antibody - Additional Information

Gene ID	**10628**

Target/Specificity
TXNIP; TXNIP antibody is human, mouse and rat reactive.

Reconstitution & Storage
TXNIP antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
TXNIP Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

TXNIP Antibody - Protein Information

Name TXNIP

Synonyms VDUP1

Function
May act as an oxidative stress mediator by inhibiting thioredoxin activity or by limiting its bioavailability (PubMed:17603038). Interacts with COPS5 and restores COPS5-induced suppression of CDKN1B stability, blocking the COPS5-mediated translocation of CDKN1B from the nucleus to the cytoplasm (By similarity). 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 (PubMed:12821938). Required for the maturation of natural killer cells (By similarity). Acts as a suppressor of tumor cell growth (PubMed:18541147). Inhibits the proteasomal degradation of DDIT4, and thereby contributes to the inhibition of the mammalian

target of rapamycin complex 1 (mTORC1) (PubMed:21460850).

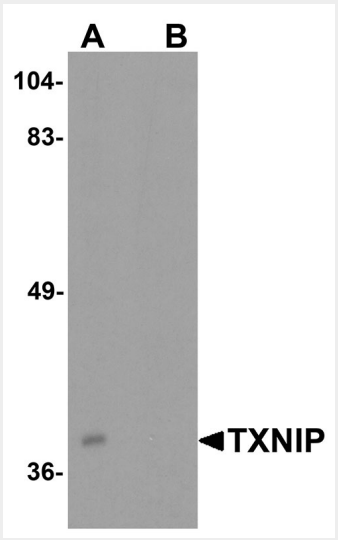
Cellular Location
Cytoplasm {ECO:0000250|UniProtKB:Q8BG60}.

TXNIP Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TXNIP Antibody - Images



Western blot analysis of TXNIP in C2C12 cell lysate with TXNIP antibody at 0.5 µg/ml in (A) the absence and (B) the presence of blocking peptide.

TXNIP Antibody - Background

Thioredoxin-interacting protein (TXNIP) belongs to the arrestin family and plays a critical role in the antioxidant defense mechanisms of hematopoietic cells by activating the p53 pathway during oxidative stress (1,2). It functions as a transcriptional repressor and acts as an oxidative stress mediator by inhibiting thioredoxin activity (2). TXNIP expression is reduced in many types of tumors, and TXNIP overexpression inhibits tumor growth by blocking cell-cycle progression (3). It has recently reported that TXNIP deficiency correlates with a high incidence of hepatocellular carcinoma (HCC) (4). TXNIP and p53 interactions could potentially be a therapeutic target for oxidative stress-related diseases such as hematopoietic malignancies and metabolic diseases (5).

TXNIP Antibody - References

Chen KS and DeLuca HF. Isolation and characterization of a novel cDNA from HL-60 cells treated with 1, 25-dihydroxyvitamin D-3. Biochim. Biophys. Acta. 1994; 1219:26-32.
Jeong M, Piao ZH, Kim MS, et al. Thioredoxin-interacting protein regulates hematopoietic stem cell quiescence and mobilization under stress conditions. J. Immunol. 2009; 183:2495–505.
Han SH, Jeon JH, Ju HR, et al. VDUP1 upregulated by TGF-beta1 and 1,25-dihydorxyvitamin D3 inhibits tumor cell growth by blocking cell-cycle progression. Oncogene 2003; 22:4035–46.
Kwon HJ, Won YS, Yoon YD, et al. Vitamin D3 up-regulated protein 1 deficiency accelerates liver regeneration after partial hepatectomy in mice. J. Hepatol. 2011; 54:1168–76.