

TXNIP (D5F3E) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R Mk	Endogenous	55	Rabbit IgG	#Q9H3M7	10628

Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

TXNIP (D5F3E) Rabbit mAb recognizes endogenous levels of total TXNIP protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val337 of human TXNIP protein.

Background

The ubiquitously expressed thioredoxin-interacting protein (TXNIP) binds and inhibits thioredoxin to regulate cellular redox state (1-3). Research studies demonstrate that hyperglycemia induces TXNIP expression and increases cellular oxidative stress (1). In addition, these studies show that TXNIP reduces glucose uptake directly by binding the glucose transporter Glut1 to stimulate receptor internalization or indirectly by reducing Glut1 mRNA levels (3). Additional studies indicate that TXNIP plays a role in the regulation of insulin mRNA transcription (4). Microarray analyses indicate that TXNIP acts downstream of PPARγ and is a putative tumor suppressor that may control thyroid cancer cell progression (5). In addition, the TXNIP protein may be a potential therapeutic target for the treatment of type 2 diabetes and some disorders related to ER-stress (6).

Background References

- Schulze, P.C. et al. (2004) *J Biol Chem* 279, 30369-74.
- Saxena, G. et al. (2010) *J Biol Chem* 285, 3997-4005.
- Wu, N. et al. (2013) *Mol Cell* 49, 1167-75.
- Xu, G. et al. (2013) *Nat Med* 19, 1141-6.
- Morrison, J.A. et al. (2014) *Mol Cancer* 13, 62.
- Robinson, K.A. et al. (2013) *J Mol Endocrinol* 50, 59-71.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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