Qty: 100 µg/400 µL

Rabbit anti-VDUP-1 (N-term)

Catalog No. 40-4600

Lot No.

Rabbit anti-VDUP-1 (N-term)

FORM
This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

PAD: ZMD.466

IMMUNOGEN
Synthetic peptide derived from the N-terminal region of human VDUP-1(Vitamin D3 up-regulated protein-1, TXNIP, TBP-2)

SPECIFICITY
This antibody is specific for the N-terminal region of the VDUP-1 protein. On Western blots, it identifies the target band at ~50 kDa.

REACTIVITY
Reactivity has been confirmed with human SK-MEL-37 melanoma, A375 skin malignant melanoma, and bovine BAEC aortic endothelial cell lysates.

Sample	Western Blotting	ELISA	Immunoprecipation (native)*
Human	+++	ND	ND
Bovine	+++	ND	ND
Immunogen	ND	ND	ND

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)
*IP is not practical because the target protein is similar in size to the heavy chain of the antibody.

USAGE
Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western Blotting: 1-3 µg/mL

STORAGE
Store at 2-8°C for up to one month. Store at –20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

BACKGROUND

TRX-interacting (TXNIP), also known as vitamin D3 up-regulated protein 1 (VDUP-1), is an endogenous inhibitor of thioredoxin (TRX).[1-4] The intracellular redox balance is maintained by reactive oxygen species (ROS) scavenging systems, and the two major intracellular thiol reducing mechanisms are the interacting glutathione and TRX systems.[5,6] TRX reduces ROS through reversible oxidation of TRX at two cysteine residues (Cys-32 and Cys-35); TRX is then reduced by TRX reductase and NAPDH.[7] TXNIP inhibits TRX antioxidative function by binding to its redox-active cysteine residues.[8,9] The TRX ROS-scavenging system is inhibited through p38 MAPK-mediated induction of TXNIP in hyperglycemia, implicating reduced TRX activity through interaction with TXNIP as an important mechanism for vascular oxidative stress in diabetes mellitus.[10] TXNIP is expressed more highly in nonmetastatic chromosome-6 containing (neo6/C8161) and in nonmetastatic melanoma than in parental (C8161) metastatic melanoma cells. The calculated molecular weight of human TXNIP is ~ 44 kDa, while the observed molecular weight is ~ 50 kDa .[9]

REFERENCES

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RELATED PRODUCTS

Product	*Conjugate*	*Cat. No.*
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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