

# VEZF1 (B-4): sc-365560

## BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. The majority of zinc-finger proteins contain a Krüppel-type DNA binding domain and a KRAB domain, which is thought to interact with KAP1, thereby recruiting histone modifying proteins. VEZF1 (vascular endothelial zinc finger 1), also known as ZNF161 or DB1, is a nuclear localizing zinc-finger protein belonging to the Krüppel C<sub>2</sub>H<sub>2</sub>-type zinc-finger family. Expressed throughout the body with the highest level of expression found in the kidneys and skeletal muscle, VEZF1 is an endothelial transcription factor that regulates ET-1 (endothelin-1) promoter expression. Through its interaction with the CT/GC-rich region of the ET-1 promoter, VEZF1 helps to regulate proper assembly of the cardiovascular system during early development by activating the expression of various genes found in the vascular endothelium.

## REFERENCES

1. Koyano-Nakagawa, N., et al. 1994. Molecular cloning of a novel human cDNA encoding a zinc finger protein that binds to the interleukin-3 promoter. *Mol. Cell. Biol.* 14: 5099-5107.
2. Lebowitz, P.F., et al. 1998. Functional interaction between RhoB and the transcription factor DB1. *Cell Adhes. Commun.* 6: 277-287.
3. Xiong, J.W., et al. 1999. VEZF1: A Zn finger transcription factor restricted to endothelial cells and their precursors. *Dev. Biol.* 206: 123-141.
4. Aitseaomo, J., et al. 2001. VEZF1/DB1 is an endothelial cell-specific transcription factor that regulates expression of the endothelin-1 promoter. *J. Biol. Chem.* 276: 39197-39205.
5. Lee, K.H., et al. 2004. Human zinc finger protein 161, a novel transcriptional activator of the dopamine transporter. *Biochem. Biophys. Res. Commun.* 313: 969-976.

## CHROMOSOMAL LOCATION

Genetic locus: VEZF1 (human) mapping to 17q22; Vezf1 (mouse) mapping to 11 C.

## SOURCE

VEZF1 (B-4) is a mouse monoclonal antibody raised against amino acids 351-516 mapping at the C-terminus of ZNF161 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-365560 X, 200 µg/0.1 ml.

VEZF1 (B-4) is available conjugated to agarose (sc-365560 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365560 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365560 PE), fluorescein (sc-365560 FITC), Alexa Fluor® 488 (sc-365560 AF488), Alexa Fluor® 546 (sc-365560 AF546), Alexa Fluor® 594 (sc-365560 AF594) or Alexa Fluor® 647 (sc-365560 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365560 AF680) or Alexa Fluor® 790 (sc-365560 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

VEZF1 (B-4) is recommended for detection of VEZF1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

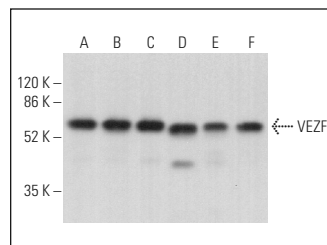
Suitable for use as control antibody for VEZF1 siRNA (h): sc-94046, VEZF1 siRNA (m): sc-155100, VEZF1 shRNA Plasmid (h): sc-94046-SH, VEZF1 shRNA Plasmid (m): sc-155100-SH, VEZF1 shRNA (h) Lentiviral Particles: sc-94046-V and VEZF1 shRNA (m) Lentiviral Particles: sc-155100-V.

VEZF1 (B-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

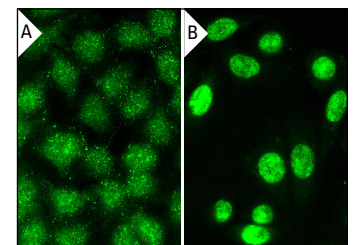
Molecular Weight of VEZF1: 56 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, NIH/3T3 whole cell lysate: sc-2210 or SJRH30 cell lysate: sc-2287.

## DATA



VEZF1 (B-4): sc-365560. Western blot analysis of VEZF1 expression in SJRH30 (A), HeLa (B), MCF7 (C), NIH/3T3 (D), C2C12 (E) and A-10 (F) whole cell lysates.



VEZF1 (B-4): sc-365560. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization (B).

## SELECT PRODUCT CITATIONS

1. Yin, R., et al. 2018. Over expressing miR-19b-1 suppress breast cancer growth by inhibiting tumor microenvironment induced angiogenesis. *Int. J. Biochem. Cell Biol.* 97: 43-51.
2. Li, L., et al. 2020. VEZF1-guanine quadruplex DNA interaction regulates alternative polyadenylation and detyrosinase activity of VASH1. *Nucleic Acids Res.* 48: 11994-12003.
3. Das, S., et al. 2023. ETV2 and VEZF1 interaction and regulation of the hemoendothelial lineage during embryogenesis. *Front. Cell Dev. Biol.* 11: 1109648.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

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