



ZNF589 (S-14): sc-100263

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. ZNF589 (zinc finger protein 589), also known as SZF1 or stem cell zinc finger protein 1, is a 364 amino acid protein that plays a role in the differentiation of hematopoietic stem cells, and may act as a repressor of DNA binding-dependent transcription. ZNF589 belongs to the krueppel C₂H₂-type zinc-finger protein family, localizes to nucleus, and contains four C₂H₂-type zinc fingers and one KRAB domain. As a result of alternative splicing, three ZNF589 isoforms exist; while the expression of ZNF589 isoform 1 has not been fully characterized, isoform 2 (also known as SZF1-2) has been found to be ubiquitously expressed and isoform 3 (also known as SZF1-1) is only found in CD34⁺ cells.

REFERENCES

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3. Liu, C., Levenstein, M., Chen, J., Tsifrina, E., Yonescu, R., Griffin, C., Civin, C.I. and Small, D. 1999. SZF1: a novel KRAB-zinc finger gene expressed in CD34⁺ stem/progenitor cells. *Exp. Hematol.* 27: 313-325.
4. Peng, H., Zheng, L., Lee, W.H., Rux, J.J. and Rauscher, F.J. 2002. A common DNA-binding site for SZF1 and the BRCA1-associated zinc finger protein, ZBRK1. *Cancer Res.* 62: 3773-3781.
5. Huntley, S., Baggott, D.M., Hamilton, A.T., Tran-Gyamfi, M., Yang, S., Kim, J., Gordon, L., Branscomb, E. and Stubbs, L. 2006. A comprehensive catalog of human KRAB-associated zinc finger genes: insights into the evolutionary history of a large family of transcriptional repressors. *Genome Res.* 16: 669-677.
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CHROMOSOMAL LOCATION

Genetic locus: ZNF589 (human) mapping to 3p21.31.

SOURCE

ZNF589 (S-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of ZNF589 of human origin.

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.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-100263 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-100263 X, 200 µg/0.1 ml.

APPLICATIONS

ZNF589 (S-14) is recommended for detection of ZNF589 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other ZNF family members.

Suitable for use as control antibody for ZNF589 siRNA (h): sc-78092, ZNF589 shRNA Plasmid (h): sc-78092-SH and ZNF589 shRNA (h) Lentiviral Particles: sc-78092-V.

ZNF589 (S-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ZNF589: 41 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.