SANTA CRUZ BIOTECHNOLOGY, INC.

EZI (H-76): sc-135119

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. As a member of the Krüppel C_2H_2-type zinc-finger protein family, EZI, also known as ZNF467 (zinc finger protein 467) or Zfp467, is a 595 amino acid nuclear protein that contains 12 C_2H_2-type zinc fingers. EZI interacts with Stat3, thereby keeping it in the nucleus and enhancing Stat3 activity. Involved in transcriptional regulation, EZI transactivates several promoters including c-Fos and OSM. EZI is considered a novel cargo protein for importin-7 and is able to perform a nucleocytoplasmic shuttling mechanism that is mediated by importin-7-dependent nuclear localization and CRM1-independent nuclear export.

REFERENCES

1. Payre, F. and Vincent, A. 1988. Finger proteins and DNA-specific recognition: distinct patterns of conserved amino acids suggest different evolutionary modes. FEBS Lett. 234: 245-250.
2. Rosenfeld, R. and Margalit, H. 1993. Zinc fingers: conserved properties that can distinguish between spurious and actual DNA-binding motifs. J. Biomol. Struct. Dyn. 11: 557-570.
3. Abrink, M., Aveskogh, M. and Hellman, L. 1995. Isolation of cDNA clones for 42 different Krüppel-related zinc finger proteins expressed in the human monoblast cell line U-937. DNA Cell Biol. 14: 125-136.
4. Marg, A., Shan, Y., Meyer, T., Meissner, T., Brandenburg, M. and Vinkemeier, U. 2004. Nucleocytoplasmic shuttling by nucleoporins Nup153 and Nup214 and CRM1-dependent nuclear export control the subcellular distribution of latent Stat1. J. Cell Biol. 165: 823-833.
5. Kumar, S., Saradhi, M., Chaturvedi, N.K. and Tyagi, R.K. 2006. Intracellular localization and nucleocytoplasmic trafficking of steroid receptors: an overview. Mol. Cell. Endocrinol. 246: 147-156.
6. Saijou, E., Itoh, T., Kim, K.W., Iemura, S., Natsume, T. and Miyajima, A. 2007. Nucleocytoplasmic shuttling of the zinc finger protein EZI Is mediated by importin-7-dependent nuclear import and CRM1-independent export mechanisms. J. Biol. Chem. 282: 32327-32337.
7. Liu, J. and Stormo, G.D. 2008. Context-dependent DNA recognition code for C_2H_2 zinc-finger transcription factors. Bioinformatics 24: 1850-1857.

CHROMOSOMAL LOCATION

Genetic locus: ZNF467 (human) mapping to 7q36.1; Zfp467 (mouse) mapping to 6 B2.3.

SOURCE

EZI (H-76) is a rabbit polyclonal antibody raised against amino acids 164-239 mapping within an internal region of EZI of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-135119 X, 200 µg/0.1 ml.

APPLICATIONS

EZI (H-76) is recommended for detection of EZI of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

EZI (H-76) is also recommended for detection of EZI in additional species, including equine, canine and porcine.

Suitable for use as control antibody for EZI siRNA (h): sc-89557, EZI siRNA (m): sc-144988, EZI shRNA Plasmid (h): sc-89557-SH, EZI shRNA Plasmid (m): sc-144988-SH, EZI shRNA (h) Lentiviral Particles: sc-89557-V and EZI shRNA (m) Lentiviral Particles: sc-144988-V.

EZI (H-76) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of EZI: 65 kDa.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

STORAGE

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

PROTOCOLS

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