SANTA CRUZ BIOTECHNOLOGY, INC.

ZNF541 (E-8): sc-515333

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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. ZNF541 (zinc finger protein 541) is a 1,365 amino acid nuclear protein that acts as a component of a chromatin remodeling multiprotein complex involved in spermatogenesis. Existing as three alternatively spliced isoforms, ZNF541 interacts with both HSPA2 and HDAC1, and contains one SANT domain, a ELM2 domain and five C_2H_2-type zinc fingers. The gene encoding ZNF541 maps to human chromosome 19q13.33. Chromosome 19 consists of over 63 million bases, houses approximately 1,400 genes and is the genetic home for a number of immunoglobulin (Ig) superfamily members, a number of ICAMs, the CEACAM and PSG family and Fc receptors (FcRs).

REFERENCES

1. Teglund, S., et al. 1994. The pregnancy-specific glycoprotein (PSG) gene cluster on human chromosome 19: fine structure of the 11 PSG genes and identification of 6 new genes forming a third subgroup within the carcinoembryonic antigen (CEA) family. Genomics 23: 669-684.
2. Wang, L., et al. 2000. C-CAM1, a candidate tumor suppressor gene, is abnormally expressed in primary lung cancers. Clin. Cancer Res. 6: 2988-2993.
3. Urrutia, R. 2003. KRAB-containing zinc-finger repressor proteins. Genome Biol. 4: 231.

CHROMOSOMAL LOCATION

Genetic locus: ZNF541 (human) mapping to 19q13.33; Zfp541 (mouse) mapping to 7 A2.

SOURCE

ZNF541 (E-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1-24 at the N-terminus of ZNF541 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ZNF541 (E-8) is available conjugated to agarose (sc-515333 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515333 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515333 PE), fluorescein (sc-515333 FITC), Alexa Fluor® 488 (sc-515333 AF488), Alexa Fluor® 546 (sc-515333 AF546), Alexa Fluor® 594 (sc-515333 AF594) or Alexa Fluor® 647 (sc-515333 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515333 AF680) or Alexa Fluor® 790 (sc-515333 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515333 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

ZNF541 (E-8) is recommended for detection of ZNF541 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 ZNF541 siRNA (h): sc-97510, ZNF541 siRNA (m): sc-155744, ZNF541 shRNA Plasmid (h): sc-97510-SH, ZNF541 shRNA Plasmid (m): sc-155744-SH, ZNF541 shRNA (h) Lentiviral Particles: sc-97510-V and ZNF541 shRNA (m) Lentiviral Particles: sc-155744-V.

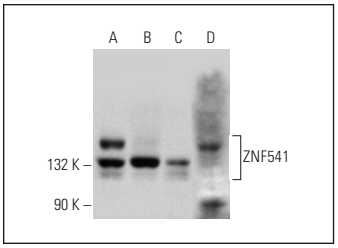
Molecular Weight of ZNF541 isoforms: 148/146/117 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or A-375 cell lysate: sc-3811.

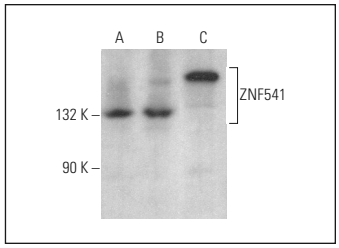
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ZNF541 (E-8): sc-515333. Western blot analysis of ZNF541 expression in Jurkat (**A**), K-562 (**B**) and A-375 (**C**) whole cell lysates and human adrenal gland tissue extract (**D**).



ZNF541 (E-8): sc-515333. Western blot analysis of ZNF541 expression in U-87 MG (**A**), Hep G2 (**B**) and F9 (**C**) whole cell lysates.

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.

PROTOCOLS

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