SANTA CRUZ BIOTECHNOLOGY, INC.

OAZ (B-7): sc-514748

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

OAZ (Olf-1/EBF associated zinc finger), also known as Roaz, is a 30-zinc finger, DNA-binding factor that associates with members of the Smad family of transcription factors in response to BMP2 activation. Bone morphogenic proteins (BMPs), are the largest group within the TGFβ growth factors superfamily and are involved in embryonic development, specifically the formation of left-right asymmetry, neurogenesis, organogenesis and skeletal development. BMPs bind to surface receptors, which then phosphorylate serine residues of specific Smad proteins to induce Smad translocation to the nucleus and transcriptional activation of BMP targeted genes. OAZ specifically cooperates with the BMP-activated Smads, namely Smad1, 5 and 8, in binding to the CAGAC and TGGAGC boxes within the BRE, or BMP response element, and activating transcription. OAZ contains a BMP signaling module formed by two clusters of fingers that individually associate with either the Smads or the BMP response element. Distinct regions of OAZ, separate from the modules involved in BMP regulation, also enable OAZ to function as a transcriptional partner of Olf-1/EBF in olfactory epithelium and lymphocyte development, indicating that, as a multi-zinc finger protein, OAZ may have dual roles in signal transduction during development.

REFERENCES

1. Hogan, B.L. 1996. Bone morphogenetic proteins: multifunctional regulators of vertebrate development. Genes Dev. 10: 1580-1594.
2. Tsai, R.Y., et al. 1997. Cloning and functional characterization of Roaz, a zinc finger protein that interacts with O/E-1 to regulate gene expression: implications for olfactory neuronal development. J. Neurosci. 17: 4159-4169.

CHROMOSOMAL LOCATION

Genetic locus: ZNF423 (human) mapping to 16q12.1.

SOURCE

OAZ (B-7) is a mouse monoclonal antibody raised against amino acids 1-105 mapping at the N-terminus of OAZ 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-514748 X, 200 µg/0.1 ml.

OAZ (B-7) is available conjugated to agarose (sc-514748 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514748 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514748 PE), fluorescein (sc-514748 FITC), Alexa Fluor® 488 (sc-514748 AF488), Alexa Fluor® 546 (sc-514748 AF546), Alexa Fluor® 594 (sc-514748 AF594) or Alexa Fluor® 647 (sc-514748 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514748 AF680) or Alexa Fluor® 790 (sc-514748 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

OAZ (B-7) is recommended for detection of OAZ of 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 OAZ siRNA (h): sc-38144, OAZ shRNA Plasmid (h): sc-38144-SH and OAZ shRNA (h) Lentiviral Particles: sc-38144-V.

OAZ (B-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

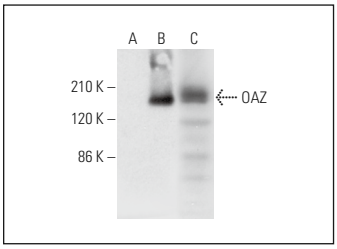
Molecular Weight of OAZ: 145 kDa.

Positive Controls: OAZ (h): 293T Lysate: sc-373007 or HT-1080 whole cell lysate: sc-364183.

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



OAZ (B-7): sc-514748. Western blot analysis of OAZ expression in non-transfected 293T: sc-117752 (**A**), human OAZ transfected 293T: sc-373007 (**B**) and HT-1080 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Pasutto, F., et al. 2017. Pseudoexfoliation syndrome-associated genetic variants affect transcription factor binding and alternative splicing of LOXL1. Nat. Commun. 8: 15466.

STORAGE

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