SANTA CRUZ BIOTECHNOLOGY, INC.

Paraxis (B-6): sc-514687

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The novel basic helix-loop-helix (bHLH) transcription factor, twist, is a putative regulator of mesodermal differentiation and myogenesis. Twist is expressed throughout the epithelial somite but not in the myotome. Twist requires dimerization with E proteins, such as Paraxis, and inhibits myogenic regulatory factors. As an early transcriptional regulator, Paraxis determines the mesoderm pattern and governs the type of mesoderm-derived cells. Paraxis is also involved in the regulaton of morphogenetic activites during somitogenesis. Paraxis, a nuclear protein containing one bHLH domain, requires dimerization with another protein in order to bind DNA efficiently.

REFERENCES

1. Carpio, R., et al. 2004. *Xenopus* Paraxis homologue shows novel domains of expression. Dev. Dyn. 231: 609-613.
2. Wilson-Rawls, J., et al. 2004. Paraxis is a basic helix-loop-helix protein that positively regulates transcription through binding to specific E-box elements. J. Biol. Chem. 279: 37685-37692.
3. Nakaya, Y., et al. 2004. Mesenchymal-epithelial transition during somitic segmentation is regulated by differential roles of Cdc42 and Rac1. Dev. Cell 7: 425-438.
4. Borue, X., et al. 2004. Normal and aberrant craniofacial myogenesis by grafted trunk somitic and segmental plate mesoderm. Development 131: 3967-3980.
5. Wilm, B., et al. 2004. The forkhead genes, Foxc1 and Foxc2, regulate paraxial versus intermediate mesoderm cell fate. Dev. Biol. 271: 176-189.
6. Schmidt, C., et al. 2004. Wnt 6 regulates the epithelialisation process of the segmental plate mesoderm leading to somite formation. Dev. Biol. 271: 198-209.

CHROMOSOMAL LOCATION

Genetic locus: TCF15 (human) mapping to 20p13.

SOURCE

Paraxis (B-6) is a mouse monoclonal antibody raised against amino acids 4-42 mapping at the N-terminus of Paraxis 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-514687 X, 200 µg/0.1 ml.

Paraxis (B-6) is available conjugated to agarose (sc-514687 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514687 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514687 PE), fluorescein (sc-514687 FITC), Alexa Fluor® 488 (sc-514687 AF488), Alexa Fluor® 546 (sc-514687 AF546), Alexa Fluor® 594 (sc-514687 AF594) or Alexa Fluor® 647 (sc-514687 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514687 AF680) or Alexa Fluor® 790 (sc-514687 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Paraxis (B-6) is recommended for detection of Paraxis 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 Paraxis siRNA (h): sc-45841, Paraxis shRNA Plasmid (h): sc-45841-SH and Paraxis shRNA (h) Lentiviral Particles: sc-45841-V.

Paraxis (B-6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

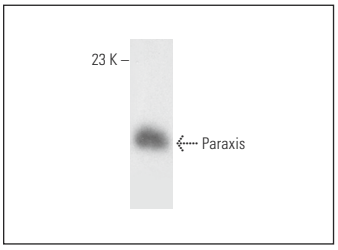
Molecular Weight of Paraxis: 21 kDa.

Positive Controls: human umbilical cord extract: sc-363783.

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



Paraxis (B-6): sc-514687. Western blot analysis of Paraxis expression in human umbilical cord tissue extract.

SELECT PRODUCT CITATIONS

1. He, J., et al. 2018. Generation of induced pluripotent stem cells from patients with COL3A1 mutations and differentiation to smooth muscle cells for ECM-surfaceome analyses. Methods Mol. Biol. 1722: 261-302.

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.