

# Paraxis (A-23): sc-133883

## 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 regulation of morphogenetic activities 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 homolog 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 Rac 1. *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; Tcf15 (mouse) mapping to 2 G3.

## SOURCE

Paraxis (A-23) is a Protein A purified rabbit polyclonal antibody raised against synthetic Paraxis peptide of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

Paraxis (A-23) is recommended for detection of Paraxis 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)] 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 siRNA (m): sc-45842, Paraxis shRNA Plasmid (h): sc-45841-SH, Paraxis shRNA Plasmid (m): sc-45842-SH, Paraxis shRNA (h) Lentiviral Particles: sc-45841-V and Paraxis shRNA (m) Lentiviral Particles: sc-45842-V.

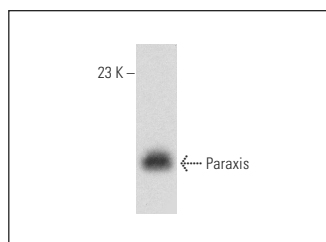
Molecular Weight of Paraxis: 21 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or human umbilical cord extract: sc-363783.

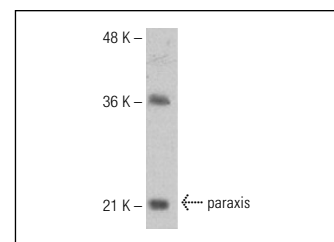
## RECOMMENDED SECONDARY REAGENTS

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).

## DATA



Paraxis (A-23): sc-133883. Western blot analysis of Paraxis expression in human umbilical cord tissue extract.



paraxis (A-23): sc-133883. Western blot analysis of paraxis expression in Jurkat whole cell lysate.

## RESEARCH USE

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