

# OTX2 (P-15): sc-30659

## BACKGROUND

Transcription factors OTX1 and OTX2, two murine homologs of the *Drosophila* orthodenticle (OTD), show a limited amino acid sequence divergence. OTX1 and OTX2 play an important role during early and later events required for proper brain development in that they are involved in the processes of induction, specification and regionalization of the brain. OTX1 is involved in corticogenesis, sensory organ development and pituitary functions, while OTX2 is necessary earlier in development, for the correct anterior neural plate specification and organization of the primitive streak. OTX2 is also required in the early specification of the neuroectoderm, which is destined to become the fore-midbrain, and both OTX1 and OTX2 cooperate in patterning the developing brain through a dosage-dependent mechanism. A molecular mechanism depending on a precise threshold of OTX proteins is necessary for the correct positioning of the isthmic region and for anterior brain patterning. The genes which encode OTX1 and OTX2 map to human chromosomes 2p15 and 14q22.3, respectively.

## REFERENCES

1. Kastury, K., et al. 1994. Chromosome locations of human EMX and OTX genes. *Genomics* 22: 41-45.
2. Suda, Y., et al. 1999. Functional equivalency between OTX2 and OTX1 in development of the rostral head. *Development* 126: 743-757.
3. Acampora, D., et al. 1999. Differential transcriptional control as the major molecular event in generating OTX1<sup>-/-</sup> and OTX2<sup>-/-</sup> divergent phenotypes. *Development* 126: 1417-1426.

## CHROMOSOMAL LOCATION

Genetic locus: OTX2 (human) mapping to 14q22.3; Otx2 (mouse) mapping to 14 C1.

## SOURCE

OTX2 (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of OTX2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG 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-30659 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-30659 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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

OTX2 (P-15) is recommended for detection of OTX2 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).

OTX2 (P-15) is also recommended for detection of OTX2 in additional species, including equine, canine, bovine, porcine and avian.

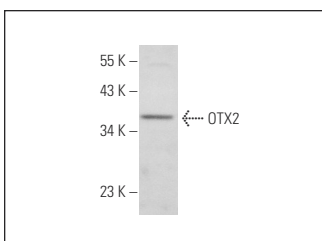
Suitable for use as control antibody for OTX2 siRNA (h): sc-38741, OTX2 siRNA (m): sc-38742, OTX2 shRNA Plasmid (h): sc-38741-SH, OTX2 shRNA Plasmid (m): sc-38742-SH, OTX2 shRNA (h) Lentiviral Particles: sc-38741-V and OTX2 shRNA (m) Lentiviral Particles: sc-38742-V.

OTX2 (P-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of OTX2: 34-37 kDa.

Positive Controls: T-47D cell lysate: sc-2293 or Jurkat whole cell lysate: sc-2204.

## DATA



OTX2 (P-15): sc-30659. Western blot analysis of OTX2 expression in T-47D whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Rath, M.F., et al. 2007. Ontogenetic expression of the OTX2 and CRX homeobox genes in the retina of the rat. *Exp. Eye Res.* 85: 65-73.
2. Hansson, M.L., et al. 2015. Efficient delivery and functional expression of transfected modified mRNA in human embryonic stem cell-derived retinal pigmented epithelial cells. *J. Biol. Chem.* 290: 5661-5672.

## RESEARCH USE

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


 MONOS  
Satisfaction  
Guaranteed

Try **OTX2 (D-8): sc-514195**, our highly recommended monoclonal alternative to OTX2 (P-15).