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 patternning. The genes which encode OTX1 and OTX2 map to human chromosomes 2p15 and 14q21-q22, respectively.

REFERENCES

CHROMOSOMAL LOCATION
Genetic locus: OTX1 (human) mapping to 2p15; OTX1 (mouse) mapping to 11 A3.2.

SOURCE
OTX1 (Y-22) is a Protein A purified rabbit polyclonal antibody raised against synthetic OTX1 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.

APPLICATIONS
OTX1 (Y-22) is recommended for detection of OTX1 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 OTX1 siRNA (h): sc-38739, OTX1 siRNA (m): sc-38740, OTX1 shRNA Plasmid (h): sc-38739-SH, OTX1 shRNA Plasmid (m): sc-38740-SH, OTX1 shRNA (h) Lentiviral Particles: sc-38739-V and OTX1 shRNA (m) Lentiviral Particles: sc-38740-V.

Molecular Weight of THP-1: 37 kDa.

Positive Controls: THP-1 cell lysate: sc-2238 or Jurkat whole cell lysate: sc-2204.

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
![Western blot analysis of OTX1 expression in THP-1 whole cell lysate.](image1.png)

![Western blot analysis of OTX1 expression in Jurkat whole cell lysate.](image2.png)

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.