

Rabbit Anti-OTX1 + OTX2 antibody

SL11958R

Product Name	OTX1 + OTX2
Chinese Name	转录因子 OTX1+OTX2 抗体
Alias	FLJ38361; Homeobox protein OTX 1; Homeobox protein OTX1; Homeobox protein OTX2; MCOPS 5; MCOPS5; MGC15736; MGC45000; Orthodenticle 1; Orthodenticle 2; Orthodenticle homeobox 1; Orthodenticle homeobox 2; Orthodenticle homolog 1; Orthodenticle homolog 2 (Drosophila); Orthodenticle homolog 2; Orthodenticle1; Orthodenticle2; Otx 1; Otx 2; otx1; OTX1_HUMAN; otx2; OTX2_HUMAN.
Research Area	Cell biology Developmental biology Neurobiology Stem cells Epigenetics
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	(predicted:Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Horse,Rabbit,Sheep) WB=1:500-2000,ICC/IF=1:100-500,ELISA=1:5000-10000 (Paraffin sections need antigen repair)
Applications	not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	37/32kDa
Cellular localization	The nucleus
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human OTX1 + OTX2: 21-120/354
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in

human, therapeutic or diagnostic applications.

PubMed

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Transcription factors, OTX1 and OTX2, are 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 co-operate 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 isthmus region and for anterior brain patterning. The genes which encode OTX1 and OTX2 map to human chromosomes 2p13 and 14q21-q22, respectively.

Function:

Function: Probably plays a role in the development of the brain and the sense organs. Can bind to the BCD target sequence (BTS): 5'-TCTAATCCC-3'.

Product Detail

Subcellular Location:

Nucleus

Tissue Specificity:

Expressed in brain.

DISEASE:

Defects in OTX2 are the cause of microphthalmia syndromic type 5 (MCOPS5) [MIM:610125]. Microphthalmia is a clinically heterogeneous disorder of eye formation, ranging from small size of a single eye to complete bilateral absence of ocular tissues. Up to 80% of cases of microphthalmia occur in association with syndromes that include non-ocular abnormalities. MCOPS5 patients manifest unilateral or bilateral microphthalmia/clinical anophthalmia and variable additional features including coloboma, microcornea, cataract, retinal dystrophy, hypoplasia or agenesis of the optic nerve, agenesis of the corpus callosum, developmental delay, joint laxity, hypotonia, and seizures.

Similarity:

Belongs to the paired homeobox family. Bicoid subfamily. Contains 1 homeobox DNA-binding domain.

SWISS:
P48167

Gene ID:
5013

Database links:

[Entrez Gene: 5013](#) Human

[Entrez Gene: 5015](#) Human

[Entrez Gene: 18423](#) Mouse

[Entrez Gene: 30501](#) Zebrafish

[SwissProt: P32242](#) Human

[SwissProt: P32243](#) Human

[SwissProt: P80205](#) Mouse

[SwissProt: P80206](#) Mouse

[SwissProt: Q91981](#) Zebrafish

[Unigene: 288655](#) Human

[Unigene: 445340](#) Human

[Unigene: 129663](#) Mouse

[Unigene: 134516](#) Mouse

[Unigene: 334](#) Zebrafish