10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

OTX1 + OTX2 Rabbit pAb

Catalog # AP99947

Product Information

Application	WB, E
Primary Accession	P32242
Other Accession	P32242
Predicted	Rat, Pig, Human, Mouse, Rabbit, Chicken, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	37327
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human OTX1 + OTX2
Epitope Specificity	21-120/354
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the paired homeobox family. Bicoid subfamily. Contains 1 homeobox DNA-binding domain.
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 microphthalia 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.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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 isthmic region and for anterior brain patterning. The genes which encode OTX1 and OTX2 map to human chromosomes 2p13 and 14q21-q22, respectively.

Additional Information

Gene ID	5013
Other Names	CPHD6; MCOPS5; A730044F23Rik; jv; id:ibd2915; otx2; zOtx2; zgc:136535; zotx-2; OTX1_HUMAN; OTX1; Orthodenticle homolog 1; OTX2_HUMAN; Orthodenticle homolog 2; OTX1_MOUSE; Otx-1; OTX2_MOUSE; Otx-2; OTX2_DANRE; orthodenticle homeobox 1; orthodenticle (Drosophila) homolog 1; orthodenticle homolog 1 (Drosophila); Homeobox protein OTX1
Dilution	WB=1:500-2000,ICC/IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	OTX1
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'.
Cellular Location	Nucleus.
Tissue Location	Expressed in brain. Detected in the anterior part of the neural fetal retina (at protein level)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.