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# OTX1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54562

## Product Information

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| **Application** | IHC-P, IHC-F, IF, ICC, E |
| **Primary Accession** | P32242 |
| **Reactivity** | Rat, Pig, Dog, Bovine |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 37327 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human OTX1 |
| **Epitope Specificity** | 1-100/354 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SUBCELLULAR LOCATION** | Nucleus |
| **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

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| **Gene ID** | 5013 |
| **Other Names** | Homeobox protein OTX1, Orthodenticle homolog 1, OTX1 |
| **Target/Specificity** | Expressed in brain. |
| **Dilution** | IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000 |
| **Format** | 0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce |
| **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

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| **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) |