



## Anti-OTX2 (Internal) polyclonal antibody (CABT-B1814)

This product is for research use only and is not intended for diagnostic use.

### PRODUCT INFORMATION

<b>Specificity</b>	Expected to react with both spliced isoforms, as well as all five polymorphic forms of human OTX2 reported by UniProt (P32243). The immunogen sequence is about 78% conserved in OTX1, this polyclonal antibody may therefore recognize OTX1. However, OTX1 cross-reactivity has not been directly tested and confirmed. OTX2 is expressed earlier than OTX1 and therefore this antibody can be used to identify OTX2 during development.
<b>Immunogen</b>	KLH-conjugated linear peptide corresponding to the internal region of human OTX2.
<b>Isotype</b>	IgG
<b>Source/Host</b>	Rabbit
<b>Species Reactivity</b>	Human
<b>Purification</b>	Affinity Purified
<b>Conjugate</b>	Unconjugated
<b>Applications</b>	WB, IHC
<b>Epitope</b>	Internal region
<b>Molecular Weight</b>	~35 kDa observed
<b>Format</b>	Liquid
<b>Concentration</b>	Please refer to lot specific datasheet.
<b>Size</b>	100 µg
<b>Buffer</b>	0.1 M Tris-Glycine (pH 7.4), 150 mM NaCl with 0.05% sodium azide.

**Preservative** 0.05% Sodium Azide

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**Storage** Stable for 1 year at 2-8°C from date of receipt.

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## BACKGROUND

### Introduction

Homeobox protein OTX2 (UniProt P32243; also known as Orthodenticle homolog 2) is encoded by the OTX2 (also known as CPHD6, MCOPS5) gene (Gene ID 5015) in human. OTX2 is a paired-type homeobox transcription factor that controls the expression of target genes by binding to regulatory regions containing the YTAATNN motifs. Studies conducted in mice shows developmental stage-dependent expression pattern. OTX2 is widely expressed in the epiblast, but becomes progressively regionalised during gastrulation to an anterior domain of the ectoderm (anterior neuroectoderm, ANE) that contains the precursor cells of the prosencephalon and the mesencephalon of the embryonic brain. The precursor cells for the anterior visceral endoderm (AVE) fail to translocate from the distal site to the anterior region of the pre-gastrulation stage Otx2-knockout embryos. The absence of the AVE, in turn, causes the loss of the source of morphogenetic signals for inducing neural differentiation of the ANE. In addition, OTX2 is shown to be essential in the anterior mesendoderm (AME) for the induction of anterior neural tissues and head formation. OTX2 is reported to mediate the transcriptions of Dkk1 and Lhx1, loss of Otx2 in the AME results in the downregulation of Dkk1 and Lhx1.

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## GENE INFORMATION

**Entrez Gene ID** [5015](#)

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**UniProt ID** [P32243](#)

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