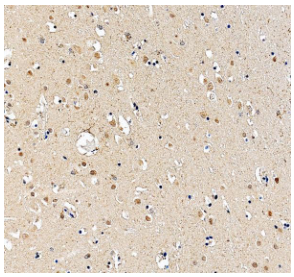
OTX2 Antibody / Orthodenticle Homeobox 2 Antibody (R31757)

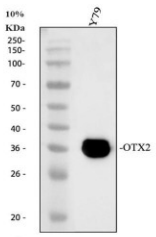
Catalog No.	Formulation	Size
R31757	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
Gene ID	5015
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This OTX2 Antibody / Orthodenticle Homeobox 2 Antibody is available for research use only.



OTX2 Antibody Human Cerebral Cortex IHC. Immunohistochemical staining of FFPE human cerebral cortex tissue demonstrates OTX2 expression following heat-induced epitope retrieval in pH8 EDTA buffer. Brown DAB staining is observed predominantly within the nuclei of scattered cortical cells, with weaker cytoplasmic staining in some cells, consistent with the localization of orthodenticle homeobox 2 as a developmental transcription factor. Nuclei are counterstained blue with hematoxylin. This OTX2 Antibody, also called Orthodenticle Homeobox 2 Antibody, is suitable for studies of neural development, transcriptional regulation, and central nervous system biology.



OTX2 Antibody Human Retinoblastoma Cell WB. Western blot demonstrates detection of OTX2 in human Y79 retinoblastoma cell lysate. A prominent immunoreactive band is observed at approximately 37 kDa, slightly above the predicted molecular weight of approximately 32 kDa, consistent with reported electrophoretic migration of orthodenticle homeobox 2. The robust expression in Y79 cells reflects the well-established role of OTX2 in retinal development and retinoblastoma biology. This OTX2 Antibody, also called Orthodenticle Homeobox 2 Antibody, is suitable for studies of neural development, retinal biology, and transcriptional regulation.

Description

OTX2 Antibody recognizes orthodenticle homeobox 2 (OTX2), a homeobox-containing transcription factor that plays an essential role in embryonic development of the central nervous system, eyes, and sensory organs. Orthodenticle homeobox 2 regulates gene expression by binding specific DNA sequences that control cell fate determination, tissue patterning, and cellular differentiation. During vertebrate development, OTX2 is indispensable for formation of the forebrain and midbrain and is also required for normal development of the retina, retinal pigment epithelium, pineal gland, inner ear, and pituitary gland. An Orthodenticle Homeobox 2 Antibody is widely used to investigate these developmental pathways and the molecular mechanisms governing tissue specification.

In adult tissues, orthodenticle homeobox 2 continues to perform specialized functions within the nervous system and visual pathway. It is required for maintenance of photoreceptors and retinal pigment epithelial cells, contributes to retinal homeostasis, and supports the survival and maturation of specific neuronal populations. OTX2 also influences cortical plasticity through intercellular transfer to parvalbumin-positive interneurons, making it an important regulator of neural circuit maturation. An Orthodenticle Homeobox 2 Antibody is therefore valuable for studies of neurodevelopment, retinal biology, and stem cell differentiation.

Aberrant expression of orthodenticle homeobox 2 has been linked to numerous human diseases, including congenital eye malformations, developmental disorders, and several malignancies. Elevated OTX2 expression has been reported in medulloblastoma, retinoblastoma, pineoblastoma, and other cancers, where it contributes to tumor cell proliferation, lineage specification, and maintenance of the malignant phenotype. Researchers frequently examine orthodenticle homeobox 2 alongside other developmental transcription factors to better understand the molecular mechanisms governing embryogenesis, tissue differentiation, and tumor biology.

An OTX2 Antibody is a valuable research tool for investigating orthodenticle homeobox 2 expression, transcriptional regulation, neural development, retinal biology, stem cell differentiation, and cancer biology.

Learn more about related developmental regulators by exploring our Transcription Factor Antibodies page.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the OTX2 Antibody / Orthodenticle Homeobox 2 Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the C-terminus of human Orthodenticle homeobox 2 (DYKDQTASWKLNFNADCLDYKDQTSSWKFQVL) was used as the immunogen for this OTX2 antibody (100% mouse homology).

Storage

After reconstitution, the OTX2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

OTX2 antibody, Orthodenticle Homeobox 2 antibody, Orthodenticle Homolog 2 antibody, Homeobox Protein OTX2 antibody

Copyright © NSJ Bioreagents. All rights reserved.