

OTX2 (D7Y3J) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	31, 33	Rabbit IgG	#P32243	5015

Product Usage Information

Application
Western Blotting

Dilution
1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

OTX2 (D7Y3J) Rabbit mAb recognizes endogenous levels of total OTX2 protein. This antibody recognizes both known human isoforms.

Species predicted to react based on 100% sequence homology

Mouse, Rat, Monkey, Chicken, Bovine, Horse, Guinea Pig

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asn251 of human OTX2 protein.

Background

Orthodenticle homeobox 2 (OTX2) belongs to the bicoid subfamily of paired-box, homeodomain-containing transcription factors. OTX2 is a critically important neuronal transcription factor that functions to regulate the expression of cell cycle genes controlling proliferation and differentiation of neural progenitor cells (1-3). In addition to its neuronal development functions, it has been reported that OTX2 can function in a non-cell autonomous manner to promote survival of damaged retinal ganglion cells (4). OTX2 has also been shown to influence the susceptibility of post-mitotic neurons to toxic insult or physiological stress (3). Notably, aberrant expression of OTX2 has been strongly linked with neuronal tumor development. For example, research studies have found OTX2 is overexpressed in many medulloblastoma cell lines, and both overexpression and gene amplification were reported in a subset of primary medulloblastomas (5). *In vitro* studies support these observations, as targeted alterations in OTX2 expression directly affected both proliferation and senescence of medulloblastoma cell lines (6,7).

Background References

1. Simeone, A. et al. (1993) *EMBO J* 12, 2735-47.
2. Omodei, D. et al. (2008) *Development* 135, 3459-70.
3. Chung, C.Y. et al. (2010) *Brain* 133, 2022-31.
4. Torero Ibad, R. et al. (2011) *J Neurosci* 31, 5495-503.
5. Adamson, D.C. et al. (2010) *Cancer Res* 70, 181-91.
6. Bunt, J. et al. (2011) *Int J Cancer* 131, E21-32.
7. Bunt, J. et al. (2010) *Mol Cancer Res* 8, 1344-57.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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