

OTX2 (D7Y3J) Rabbit mAb

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

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

Product Usage Information**Application**

Western Blotting
Simple Western™

Dilution

1:1000
1:10 - 1:50

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 **W-S:** Simple Western™

Cross-Reactivity Key

H: Human

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.