

LMX1B Antibody

Catalog # ASC11570

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	O60663
Other Accession	NP_001167617 , 292494913
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	44917
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	LMX1B antibody can be used for detection of LMX1B by Western blot at 1 - 2 μ g/mL. Antibody can also be used for Immunohistochemistry starting at 5 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	4010
Other Names	LIM homeobox transcription factor 1-beta, LIM/homeobox protein 1.2, LMX-1.2, LIM/homeobox protein LMX1B, LMX1B
Target/Specificity	LMX1B; At least three isoforms are known to exist. This antibody is predicted to not cross-react with LMX1A.
Reconstitution & Storage	LMX1B antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	LMX1B Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LMX1B
Function	Transcription factor involved in the regulation of podocyte- expressed genes (PubMed: 24042019 , PubMed: 28059119). Essential for the specification of dorsal limb fate at both the zeugopodal and autopodal levels.
Cellular Location	Nucleus {ECO:0000255 PROSITE-ProRule:PRU00108}.
Tissue Location	Expressed in most tissues. Highest levels in testis, thyroid, duodenum, skeletal muscle, and pancreatic islets

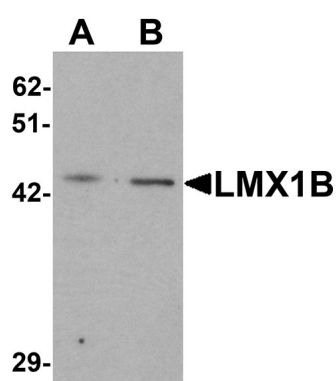
Background

LMX1B Antibody: The LIM homeobox transcription factor 1B (LMX1B) belongs to the LIM-homeodomain family. Members of this family are known to be important for pattern formation during development. LMX1B regulates mid-hindbrain patterning; LMX1B-null mice embryos have a severe reduction in the number of midbrain dopaminergic neurons compared to wild-type. While LMX1B appears to be important for both the development and the survival of dopamine neurons, the related LMX1A is crucial for the differentiation of these cells. However, LMX1A and LMX1B function cooperatively to regulated the proliferation, specification and differentiation of midbrain dopaminergic neuronal progenitors.

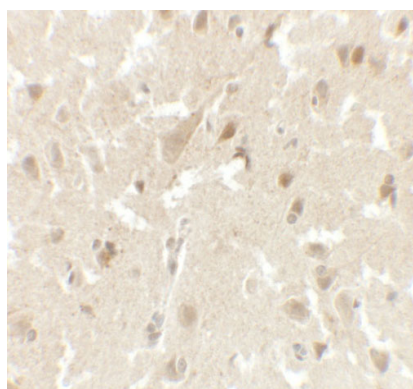
References

Hobert O and Westphal H. Functions of LIM-homeobox genes. Trends Genet. 2000; 16:75-83.
Nakatani T, Kumai M, Mizuhara E, et al. Lmx1a and Lmx1b cooperate with Foxa2 to coordinate the specification of dopaminergic neurons and control of floor plate cell differentiation in the developing mesencephalon. Dev. Biol. 2010; 339:101-13.
Guo C, Qiu HY, Huang Y, et al. Lmx1b is essential for FGF8 and Wnt1 expression in the isthmic organizer during tectum and cerebellum development in mice. Development 2007; 134:317-25.
Chizhikov VV and Millen KJ. Control of roof plate formation by LMX1A in the developing spinal cord. Development 2004; 131:2693-705.

Images

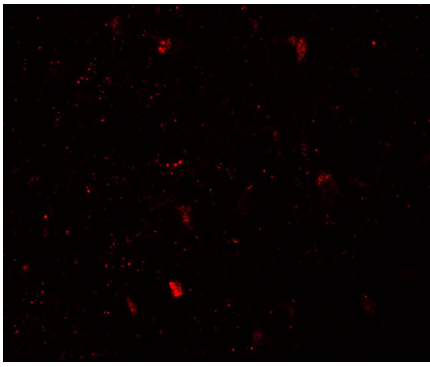


Western blot analysis of LMX1B in A-20 cell lysate with LMX1B antibody at (A) 1 and (B) 2 $\mu\text{g/mL}$.



Immunohistochemistry of LMX1B in human brain tissue with LMX1B antibody at 5 $\mu\text{g/mL}$.

Immunofluorescence of LMX1B in human brain tissue with LMX1B antibody at 20 $\mu\text{g/mL}$.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.