

LMX1A Antibody

Catalog # ASC11569

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q8TE12
Other Accession	NP_796372 , 28893581
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	42747
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	LMX1A antibody can be used for detection of LMX1A by Western blot at 1 - 2 μ g/mL. Antibody can also be used for Immunohistochemistry starting at 2.5 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	4009
Other Names	LIM homeobox transcription factor 1-alpha, LIM/homeobox protein 1.1, LMX-1.1, LIM/homeobox protein LMX1A, LMX1A
Target/Specificity	LMX1A; At least two isoforms are known to exist. This antibody is predicted to not cross-react with LMX1B.
Reconstitution & Storage	LMX1A 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	LMX1A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LMX1A
Function	Acts as a transcriptional activator by binding to an A/T-rich sequence, the FLAT element, in the insulin gene promoter. Required for development of the roof plate and, in turn, for specification of dorsal cell fates in the CNS and developing vertebrae (By similarity).
Cellular Location	Nucleus {ECO:0000255 PROSITE-ProRule:PRU00108}.
Tissue Location	Isoform 1 is expressed in many tissues. Not found in heart, liver, spleen and

testis. Relatively highly expressed in fetal brain. Isoform LMX1A-4AB is expressed in testis

Background

LMX1A Antibody: The LIM homeobox transcription factor 1 (LMX1A) belongs to the LIM-homeodomain family. Members of this family are known to be important for pattern formation during development. LMX1A binds an A/T-rich sequence and functions in the nucleus as a transcriptional activator to the insulin gene promoter. In the developing embryo, LMX1A is expressed along the neuraxis and leads to the development of the roof plate of the vertebrae. While LMX1A is crucial for the differentiation of dopamine neurons, the related LMX1B appears to be important for both the development and the survival of these cells. It has been suggested that LMX1A might be a useful biomarker or risk factor in tumor aggressiveness.

References

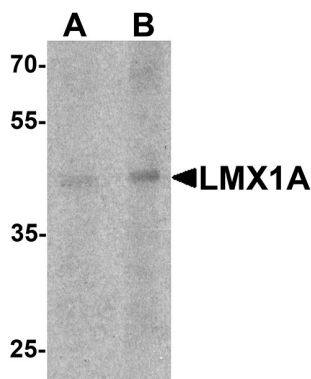
Failli V, Bachy I and Retaux S. Expression of the LIM-homeodomain gene *Lmx1a* (dreher) during development of the mouse nervous system. *Mech. Dev.* 2002; 118:225-8.

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.

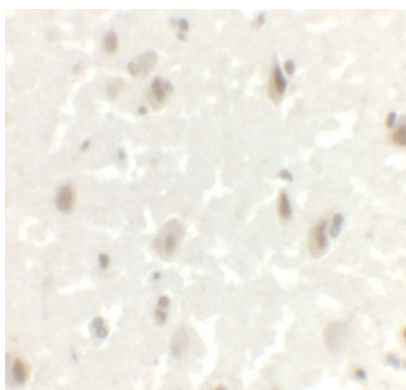
Chizhikov VV and Millen KJ. Control of roof plate formation by LMX1A in the developing spinal cord. *Development* 2004; 131:2693-705.

Lin CK, Chao TK, Lai HC, et al. LMX1A as a prognostic marker in ovarian mucinous cystadenocarcinoma. *Am. J. Clin. Pathol.* 2012; 137:971-7.

Images

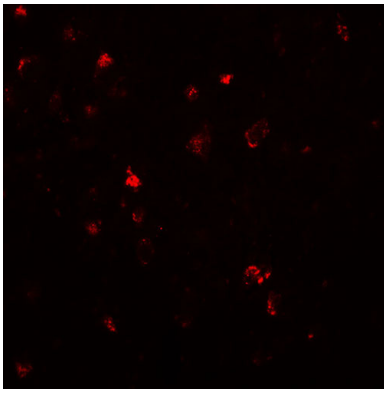


Western blot analysis of LMX1A in rat brain tissue lysate with LMX1A antibody at (A) 1 and (B) 2 $\mu\text{g/mL}$.



Immunohistochemistry of LMX1A in human brain tissue with LMX1A antibody at 2.5 $\mu\text{g/mL}$.

Immunofluorescence of LMX1A in human brain tissue with LMX1A antibody at 20 $\mu\text{g/mL}$.



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