



LMX1A (h): 293T Lysate: sc-172272

BACKGROUND

LMX1A, also called LMX-1.1 or LIM homeobox transcription factor 1 α , belongs to the LIM-homeodomain family. Members of this family are known to be important for pattern formation during development. LMX1A 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. Two isoforms of LMX1A exist due to alternative splicing. Isoform 1 represents the full length protein and is expressed in many tissues including fetal brain, but is absent in heart, liver, spleen and testis. The second isoform, designated LMX1A-4AB, lacks amino acids 1-249 and is expressed in testis.

REFERENCES

1. Millonig, J.H., Millen, K.J. and Hatten, M.E. 2000. The mouse Dreher gene LMX1A controls formation of the roof plate in the vertebrate CNS. *Nature* 403: 764-769.
2. Thameem, F., Wolford, J.K., Wang, J., German, M.S., Bogardus, C. and Prochazka, M. 2002. Cloning, expression and genomic structure of human LMX1A, and variant screening in Pima Indians. *Gene* 290: 217-225.
3. Failli, V., Bachy, I. and Rétaux, S. 2002. Expression of the LIM-homeodomain gene LMX1A (Dreher) during development of the mouse nervous system. *Mech. Dev.* 118: 225-228.
4. Chizhikov, V.V. and Millen, K.J. 2004. Control of roof plate formation by LMX1A in the developing spinal cord. *Development* 131: 2693-2705.
5. Chizhikov, V.V. and Millen, K.J. 2004. Control of roof plate development and signaling by LMX1B in the caudal vertebrate CNS. *J. Neurosci.* 24: 5694-5703.
6. Andersson, E., Tryggvason, U., Deng, Q., Friling, S., Alekseenko, Z., Robert, B., Perlmann, T. and Ericson, J. 2006. Identification of intrinsic determinants of midbrain dopamine neurons. *Cell* 124: 393-405.
7. Burbach, J.P. and Smidt, M.P. 2006. Molecular programming of stem cells into mesodiencephalic dopaminergic neurons. *Trends Neurosci.* 29: 601-603.

CHROMOSOMAL LOCATION

Genetic locus: LMX1A (human) mapping to 1q23.3.

PRODUCT

LMX1A (h): 293T Lysate represents a lysate of human LMX1A transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

LMX1A (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive LMX1A antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.