



Wnt-5a (m): 293T Lysate: sc-124651

BACKGROUND

The Wnt genes belong to a family of proto-oncogenes with at least 13 known members that are expressed in species ranging from *Drosophila* to human. The name Wnt denotes the relationship of this family to the *Drosophila* segment polarity gene "wingless" and to its vertebrate ortholog, Int1, a mouse proto-oncogene. Transcription of Wnt family genes appears to be developmentally regulated in a precise temporal and spatial manner. The Wnt genes encode cysteine-rich putative glycoproteins, which have features typical of secreted growth factors. Northern blot analysis detects expression of Wnt-5a in brain, lung and heart. At least five distinct Wnt-5a transcripts are observed, which are due to transcript variability 5' to the initiation methionine. *In situ* hybridization detects a complex spatial and temporal pattern of Wnt-5a in the mouse, including expression in the developing central nervous system, limbs, facial processes and the posterior region of the fetus. Human frizzled-5 is the receptor for the Wnt-5a ligand. It is suggested that Wnt-5a augments primitive hematopoietic development *in vivo* and represents an *in vivo* regulator of hematopoietic stem cell function in the human.

REFERENCES

1. Gavin, B.J., et al. 1990. Expression of multiple novel Wnt-1/Int-1-related genes during fetal and adult mouse development. *Genes Dev.* 4: 2319-2332.
2. Clark, C.C., et al. 1993. Molecular cloning of the human proto-oncogene Wnt-5a and mapping of the gene (WNT5A) to chromosome 3p21-p14. *Genomics* 18: 249-260.
3. He, X., et al. 1997. A member of the frizzled protein family mediating axis induction by Wnt-5a. *Science* 275: 1652-1654.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 164975. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Murdoch, B., et al. 2003. Wnt-5a augments repopulating capacity and primitive hematopoietic development of human blood stem cells *in vivo*. *Proc. Natl. Acad. Sci. USA* 100: 3422-3427.

CHROMOSOMAL LOCATION

Genetic locus: Wnt5a (mouse) mapping to 14 A3.

PRODUCT

Wnt-5a (m): 293T Lysate represents a lysate of mouse Wnt-5a transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Wnt-5a (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Wnt-5a antibodies. Recommended use: 10-20 µl 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.