Docket #: S01-245

Anti-Meis Monoclonal Antibody

Researchers in the laboratory of Dr. Michael Cleary at Stanford University have developed anti-Meis monoclonal antibodies to study transcriptional regulation, embryonic development, and tissue homeostasis. Meis proteins are members of the TALE (three-amino-acid loop extension) superclass of homeodomain proteins that are targets for oncogenic mutations in human and murine leukemias. The homeobox protein, Hoxb1, employs both Meis-related proteins and Pbx as essential cofactors to mediate its transcriptional effects on an endogenous Hox response element. The Meis protein is expressed in mouse hindbrain during embryonic development. In the medulla, Meis proteins appear to mediate the movement of Pbx3a into the nuclei of neurons. The anti-Meis antibodies could be used in research related to leukemia, embryonic development, and tissue homeostasis.

Applications

- **Research** related to:
  - leukemia
  - embryonic development
  - tissue homeostasis

Publications

- Rhee JW, Arata A, Selleri L, Jacobs Y, Arata S, Onimaru H, Cleary ML., "Pbx3 deficiency results in central hypoventilation." *Am J Pathol.* 2004 Oct;165(4):1343-50.
- Jacobs Y, Schnabel CA, Cleary ML., "Trimeric association of Hox and TALE homeodomain proteins mediates Hoxb2 hindbrain enhancer activity." *Mol Cell Biol.* 1999 Jul;19(7):5134-42.
- Chang CP, Jacobs Y, Nakamura T, Jenkins NA, Copeland NG, Cleary ML., "Meis proteins are major in vivo DNA binding partners for wild-type but not chimeric

Pbx proteins." *Mol Cell Biol.* 1997 Oct;17(10):5679-87.

Innovators

- Michael Cleary
- Yakop Jacobs

Licensing Contact

Brenda Martino

Biological Materials Specialist

Email