

Docket #: S01-245F

Anti-Pbx (long form) monoclonal antibody

Researchers in the laboratory of Dr. Michael Cleary at Stanford University have developed anti-Pbx (long form) monoclonal antibodies to study transcriptional regulation, embryonic development, and tissue homeostasis. *Pbx* genes code for a family of highly conserved homeodomain proteins of the TALE (three-amino acid loop extension) class that participate in multiprotein complexes to regulate developmental gene expression. Pbx proteins also heterodimerize with the Meis/Prep subfamily of TALE-class homeodomain proteins to form trimeric complexes with Hox proteins on appropriate DNA sites that regulate developmental gene expression. Additional isoforms of mammalian Pbx proteins arise from differential splicing of *Pbx* transcripts to yield high molecular-weight (MW) (Pbx1a, Pbx2, Pbx3a, and Pbx4) and low-MW (Pbx1b and Pbx3b) forms of the respective proteins. The anti-Pbx (long form) monoclonal antibody recognizes three Pbx high-MW isoforms.

Applications

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

Publications

- Selleri L, DiMartino J, van Deursen J, Brendolan A, Sanyal M, Boon E, Capellini T, Smith KS, Rhee J, Popperl H, Grosveld G, Cleary ML. ["The TALE homeodomain protein Pbx2 is not essential for development and long-term survival."](#) *Mol Cell Biol.* 2004 Jun;24(12):5324-31.

Innovators

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