Docket #: S16-171

A mouse platform to isolate murine long-term hematopoietic stem cells

Researchers in Prof. Irving Weissman's laboratory have produced a mouse to identify and isolate mouse long-term hematopoietic stem cells. The Hoxb5 was identified as a gene specifically expressed only in long-term hematopoietic stem cell (LT-HSCs) in mouse hematopoietic compartment by multi-step screening. By utilizing fluorescent proteins under the endogenouse expression control, LT-HSCs can be isolated.

Mouse strain deposited at RIKEN:
https://knowledge.brc.riken.jp/resource/animal/card?__lang__=en&brc_no=RBRC09733

Applications

- Use as a report to utilize multi-color flow cytometry to identify HSCs in mouse bone marrow.

Advantages

- To localize mouse LT-HSC's with a single fluorescent color.

Publications

- Chen JY, Miyanishi M, Wang, SK, Yamazaki S, Sinha R, Kao KS, Seita J, Sahoo D, Nakauchi H, Weissman IL. (2016) Hoxb5 marks long-term haematopoietic stem cells revealing a homogeneous perivascular niche. Nature 530: 223-227.

Patents

- Published Application: 20170350879
- Issued: 10,386,361 (USA)

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