

**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 endogenous 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](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 \(USA\)](#)

## **Innovators**

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- James Chen
- Masanori Miyanishi

## **Licensing Contact**

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