Transgenic Mice Expressing Human Alkaline Phosphatase

WARF: P01323US

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing transgenic mice that ubiquitously express the marker gene *hPAP*.

Overview

The ability to unambiguously mark a cell's genotype is essential for studies in which genetically distinct cell populations must be distinguished from one another *in vivo*.

The Invention

UW-Madison researchers have now developed transgenic mice that ubiquitously express the marker gene *human placental alkaline phosphatase* (*hPAP*). They used an 800-base pair fragment of a promoter region from ROSA26 cells in a genetic construct with *hPAP*.

Several lines of transgenic mice from both the FVB/N and C57BL/6 mouse strains were created using the microinjection technique. The ROSA26 promoter directs ubiquitous expression of hPAP during embryonic and postnatal development in the mice.

Applications

- Marking donor cells in transplantation studies
- Embryonic chimera studies and lineage analyses

Key Benefits

- Marker gene is expressed ubiquitously.
- Marker is easily detectable with no background staining.
- Permits monitoring of engraftment of transplanted cells
- Because hPAP is heat stable, fixed- and paraffin-embedded tissue sections can be incubated directly with substrate.

Additional Information

For More Information About the Inventors

- Eric Sandgren

Tech Fields

- Research Tools : Animal & disease models

For current licensing status, please contact Jennifer Gottwald at jennifer@warf.org or 608-960-9854