

Isolation of single-base genome-edited human iPS cells without antibiotic selection.

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Public Summary:

Precise editing of human genomes in pluripotent stem cells by homology-driven repair of targeted nuclease-induced cleavage has been hindered by the difficulty of isolating rare clones. We developed an efficient method to capture rare mutational events, enabling isolation of mutant lines with single-base substitutions without antibiotic selection. This method facilitates efficient induction or reversion of mutations associated with human disease in isogenic human induced pluripotent stem cells.

Scientific Abstract:

Precise editing of human genomes in pluripotent stem cells by homology-driven repair of targeted nuclease-induced cleavage has been hindered by the difficulty of isolating rare clones. We developed an efficient method to capture rare mutational events, enabling isolation of mutant lines with single-base substitutions without antibiotic selection. This method facilitates efficient induction or reversion of mutations associated with human disease in isogenic human induced pluripotent stem cells.

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