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Multiplexed Surface Tethering of Extracellular Proteins (MultiSTEP) Protocols

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Abstract

Multiplexed Surface Tethering of Extracellular Proteins (MultiSTEP) combines multiplexed human cell surface display with a genomically encoded landing pad to measure the effects of secreted protein variants at scale. The following protocols detail library cloning in the MultiSTEP system, tissue culture experiments, and measurement of variant abundance via flow cytometry.

Files

 SEARCH

Protocol

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Site-saturation mutagenesis library cloning

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Barcoding site-saturation mutagenesis libraries

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Illumina NGS sequencing of library plasmid

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PacBio long-read sequencing

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Purity sorting HEK293F cells

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Library transfection

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Staining Experiment and Sorting of 293F Cells

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Barcode Sequencing by Illumina NGS

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PCR amplification of the barcode region

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