LASE Innovation

TALON Biomarkers

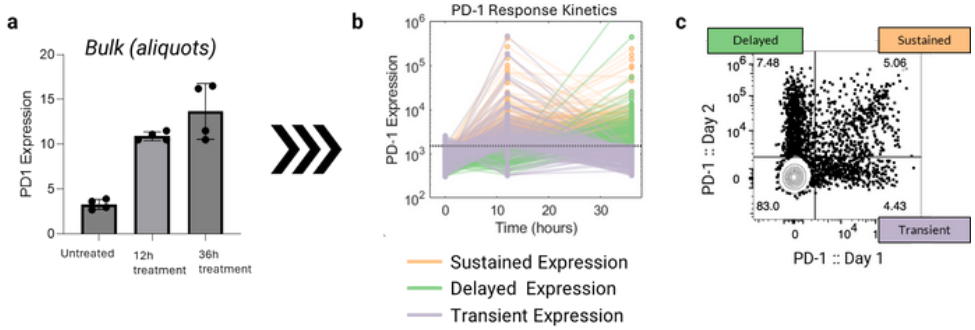
Product Spotlight

Time-Lapse™ TITAN Assay Service

Deeply Characterize Human T cell Responses

Characterizing T cell responses to perturbation at a single-cell resolution is now possible with the Time-lapse TITAN assay service from LASE Innovation and Talon Biomarkers.

Conventional Flow



Achieve single-cell resolution

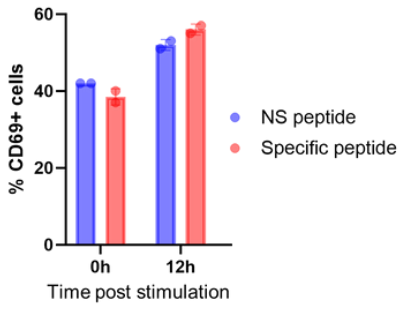
Track the expression of key T cell activation markers on the same cells across time to provide unparalleled insight into T cell heterogeneity, function and drug response.
Resolve what conventional flow cytometry misses:

- Subtle shifts in activation marker expression over time
- Differences in activation kinetics of various markers & pathways
- Delayed, transient or mixed responses
- Specific vs. non-specific peptide or antigen activation
- De novo biomarker expression in high backgrounds

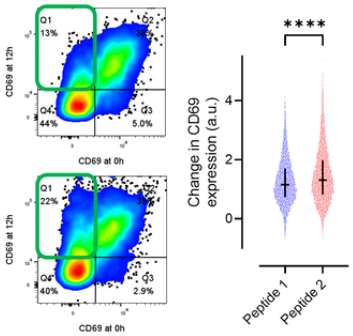
Superior Sensitivity

- Measuring single-cell responses over time, using each cell as its own control (compared to conventional bulk measurements across multiple samples)
- Acquiring marker expression trajectories enables deeper characterization of heterogeneity (compared to conventional snapshot measurements classifying + or - only)

Conventional Flow (Bulk)



Time-lapse flow



# of markers	1	3	7
1 timepoint	2	8	256
3 timepoints	**8**	**512**	**2 million**

Over 2 million possible phenotypes with 7 markers and 3 time-points

Service Details

Biomarkers measured

Marker	Function
CD4	Cell Lineage marker
CD8a	Cell Lineage marker
CD25	Activation Marker
CD38	Activation/Differentiation Marker
CD62L	Central Memory Differentiation Marker
CD69	Activation Marker
PD-1	Activation/Exhaustion marker
Viability Dye	Viability

*Optional ICS after last time-point (TNFa, IFNg, IL2)

Sample Type

- Human T cells (Customer supplied or isolated at LASE facilities)

Timepoints

- 3 user-selected timepoints pre/post treatment (from 0h to 72h)

- Generate novel data sets from as little as **two samples** (eg. Stim + control)
- Includes Full Analysis and Annotated Report

Stimulations supported	
bsAb CD3/CD28	Checkpoint Inhibitor
PHA	LNP
Cytostim™	Monoclonal antibody/Drug
Peptide	Multimer/Dextramers

For more information visit:
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