

Orgcode™ Mito

Early Access Program

A new approach to mitochondrial characterization

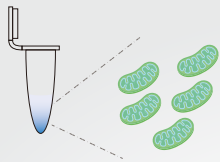
Mitochondria vary, and their protein signatures may change with tissue, condition, and time.

Orgcode™ Mito profiles co-localized protein signatures on individual mitochondria, adding molecular context beyond single markers or bulk measurements.

Powered by soPBA™

single-organelle Proximity Barcoding Assay

How Orgcode™ Mito works



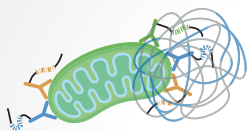
1. Isolate mitochondria

Isolate mitochondria from the sample.



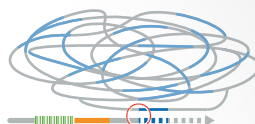
2. Label targeted proteins

DNA-barcoded PBA probes bind selected mitochondrial proteins.



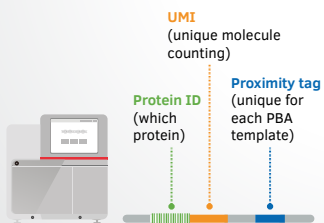
3. Capture proximity

PBA templates capture nearby probes on the same mitochondrion.



4. Assign a shared tag

DNA extension assigns a shared proximity tag to captured PBA probes.



5. Sequencing

Next-generation sequencing reads the linked protein identities.

Protein signature	Detected proteins
Signature 1	A + G
Signature 2	D + E + F + G
⋮	⋮
Signature n	E + F + G + H



6. Analyze protein signatures

Data are decoded into protein profiles, co-localization patterns, and biological heterogeneity.

Technology foundation

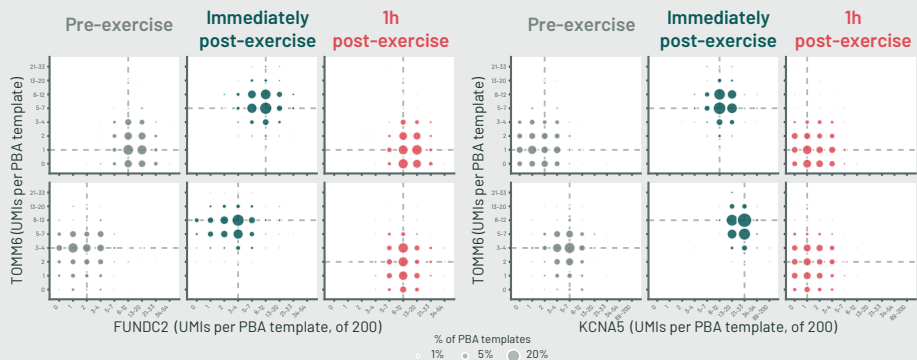
Proximity barcoding was first demonstrated for highly multiplexed surface-protein profiling of individual extracellular vesicles in *Nature Communications* (2019). Orgcode™ Mito extends this established approach to organelle biology.

Wu D, Yan J, Shen X, et al. Profiling surface proteins on individual exosomes using a proximity barcoding assay. *Nature Communications* 10, 3854 (2019). doi:10.1038/s41467-019-11486-1

See mitochondrial signatures shift across time and tissue

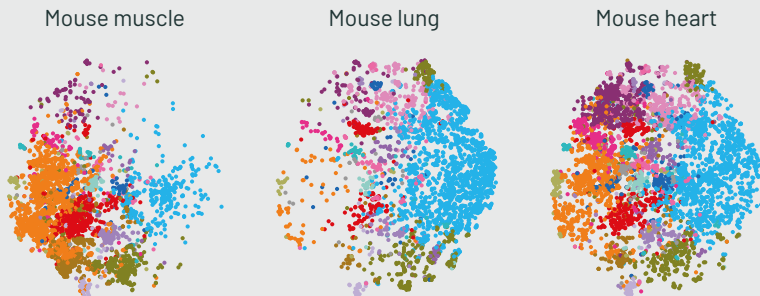
Exercise-linked change

PBA-template UMI counts for TOMM6/FUNDC2 and TOMM6/KCNA5 shifted after exercise and at 1h post-exercise in plasma-derived samples.



Tissue-associated patterns

t-SNE profiles from mouse muscle, lung, and heart mitochondria show tissue-associated patterns and variation within each tissue. Colors indicate FlowSOM clusters.



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Selected laboratories receive:

- Complimentary Orgcode™ Mito analysis service
- A profiling report and data interpretation support
- Direct collaboration with the Secrettech Biosciences R&D team

Bring your samples and research question.
Help shape what comes next.



Scan to apply

Application takes ~10 min

Questions?

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*For research laboratories, biotechnology companies, pharmaceutical R&D groups, and core facilities.
Participation is by application and selection.*