Screens for mitochondrial function in yeast identified compounds that increase the mitochondrial membrane potential and adenosine triphosphate (ATP) levels. Secondary testing with myotubes, fibroblasts, and PC-12 and HepG2 cells identified compounds increasing ATP levels in hepatocytes and compounds increasing ATP in fibroblasts.

Compounds are from TimTec screening collections: Diveristy SET, NDL-3000, and NPL.

Available identified hits and related compounds from primary and secondary screens described in the publication. Download Excel file with structural information

**ID numbers**

| | |
|---|---|
| ST003704 | |
| ST003709 | |
| ST003710 | |
| ST003711 | |
| ST003713 | |
| ST005192 | |
| ST005213 | |
| ST006407 | ST008330 |
| ST008364 | |
| ST008365 | |
| ST018585 | |
| ST019694 | |
| ST019697 | |
| ST024021 | |
| ST029445 | ST029634 |
| ST030891 | |
| ST030931 | |
| ST037386 | |
| ST037803 | |
| ST038005 | |
| ST038642 | |
| ST038645 | ST038830 |

ST049545
ST052057
ST052484
ST053241
ST053256
ST081858

Price per compound is **0.1mg/$29.00, 0.25mg/$36.00, 0.5mg/$45.00, 1mg/$55.00, 2mg/$77.00, plus shipping from DE, USA** . Please e-mail selected ID numbers for discounted quote for multiple samples purchase. Custom formatting is available.

**Currently unavailable samples:**

- ST003707
- ST003712
- ST032288
- ST032694

## Reference

Montague CR, Fitzmaurice A,et.al. Screen for Small Molecules Increasing the Mitochondrial Membrane Potential. J Biomol Screen. 2013 Jul 18.

## Abstract

The identification of small molecules that positively modulate the mitochondrial respiratory function has broad applications in fundamental research, therapeutic target validation, and drug discovery. We present an approach in which primary screens for mitochondrial function in yeast are used to efficiently identify a subset of high-value compounds that can in turn be rapidly tested against a broad range of mammalian cell lines. The ability of the yeast assay to successfully identify in a high-throughput format hit compounds that increase the mitochondrial membrane potential and adenosine triphosphate (ATP) levels by as little as 15% was demonstrated. In this study, 14 hits were identified from a collection of 13,680 compounds. Secondary testing with myotubes, fibroblasts, and PC-12 and HepG2 cells identified two compounds increasing ATP levels in hepatocytes and two other compounds increasing ATP in

fibroblasts. The effect on hepatocytes was further studied using genomic and mitochondrial proteomic tools to characterize the changes induced by the two compounds. Changes in the accumulation of a series of factors involved in early gene response or apoptosis or linked to metabolic functions (i.e., ß-Klotho, RORa, PGC-1a, G6PC, IGFBP1, FTL) were discovered.