

Analyzing Mitochondrial Function in a *Drosophila melanogaster* PINK1^{B9}-Null Mutant Using High-resolution Respirometry

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Materials

Name	Company	Catalog Number	Comments
ADP	Sigma-Aldrich	A5285	Adenosine 5'-diphosphate sodium salt (CAS number 72696-48-1); ≥95%; molecular weight = 501.31 g/mol.
Ágar	Kasv	K25-1800	For bacteriological use
Antimycin-A	Sigma-Aldrich	A8674	Antimycin A from Streptomyces sp. (CAS number 1397-94-0); molecular weight 540 g/mol;
Bovine Serum Albumin (BSA)	Sigma-Aldrich	A7030	Bovine Serum Albumin (CAS number 9048-46-8); pH 7,0 ≥ 98%
Datlab software	Oroboros Instruments, Innsbruck, Austria	20700	Software for data acquisition and analysis
Digitonin	Sigma-Aldrich	D 5628	CAS number 11024-24-1
Distilled water			
<i>Drosophila melanogaster</i> strain w[*] Pink1[B9]/FM7i, P{w[+mC]=ActGFP}JMR3			Obtained from Bloomington Drosophila stock center
<i>Drosophila melanogaster</i> strain w ¹¹¹⁸			Obtained from the Federal University of Santa Maria
EGTA	Sigma-Aldrich	E8145	Ethylene glycol-bis(2-aminoethylether)-N,N,N',N'-tetraacetic acid (CAS number 13638-13-3); ≥97%; molecular weight =468.28 g/mol
FCCP	Sigma-Aldrich	C2920	Carbonyl cyanide 4-(trifluoromethoxy)phenylhydrazone (CAS number 370-86-5); ≥98% (TLC), powder
GraphPad Prism version 8.0.1.			Software for data acquisition and analysis

Hepes	Sigma-Aldrich	H4034	4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid (CAS number 7365-45-9); ≥99,5% (titration), cell cultured tested; molecular weight = 238.30 g/mol
High-resolution respirometer Oxygraph O2K	Oroboros Instruments, Innsbruck, Austria	10022-02	Startup O2K respirometer kit
KH ₂ PO ₄	Sigma-Aldrich	P5379	Monopotassium phosphate (CAS number 7778-77-0); Reagente Plus, molecular weight = 136.09 g/mol
KOH	Sigma-Aldrich	211473	Potassium hydroxide (CAS number 1310-58-3); ACS reagent, ≥85%, pellets
Malate	Sigma-Aldrich	M1296	Malonic acid (CAS number 141-82-2); 99%, molecular weight = 104.06 g/mol). A solution is pH adjusted to approximately 7.0.
Malic acid	Sigma-Aldrich	M1000	(S)-(-)-2-Hydroxysuccinic acid (CAS number 97-67-6); ≥95% ; molecular weight = 134.09 g/mol
MES	Sigma-Aldrich	M3671	2-(N-Morpholino)ethanesulfonic acid (CAS number 4432-31-9); ≥99% (titration); molecular weight = 195.24 g/mol
MgCl ₂	Sigma-Aldrich	M8266	Magnesium chloride (CAS number 7786-30-3); anhydrous, ≥98%, molecular weight = 95.21 g/mol
Microcentrifuge tubes	Eppendorf		
O2K-Titration Set	Oroboros Instruments, Innsbruck, Austria	20820-03	Hamilton syringes with different volumes
Oligomycin	Sigma-Aldrich	O 4876	Oligomycin from Streptomyces diastatochromogenes (CAS number 1404-19-9); ≥90% total oligomycins basis (HPLC)
Pistil to homogenization			
Proline	Sigma-Aldrich	P0380	L-Proline (CAS number 147-85-3); powder; 99%; molecular weight = 115.13 g/mol
Pyruvate	Sigma-Aldrich	P2256	Sodium pyruvate (CAS number 113-24-6), ≥99%; molecular weight = 110.04 g/mol
Rotenone	Sigma-Aldrich	R8875	Rotenone (CAS number 83-79-4); ≥95%, molecular weight 394.42 g/mol
Succinate	Sigma-Aldrich	S 2378	Sodium succinate dibasic hexahydrate (CAS number 6106-21-4); ≥99%
Sucrose	Merck	107,651,000	Sucrose for microbiology use (CAS number 57-50-1)
Taurine	Sigma-Aldrich	T0625	CAS number 107-35-7