Mitochondrial Physiology Network 09.12: 1 (2011)

Oxygraph-2k Manual Titrations: Mitochondria, Permeabilized Cells, and Biopsies

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Oxygraph-2k Chamber Volume: 2.0 ml

Substrates	Event	Concentration in syringe (solvent)	Storage [°C]	Final conc. in 2 ml O2k-chamber	Titration [µl] into 2 ml	Syringe [µl]
Pyruvate	P	2 M (H_2O)	fresh	5 mM	5	25
Malate	M	0.8 M (H_2O)	-20	2 mM	5	25
Glutamate	G	2 M (H_2O)	-20	10 mM	10	25
Succinate	S	1 M (H_2O)	-20	10 mM	20	50
Ascorbate	As	0.8 M (H_2O)	-20	2 mM	5	25
TMPD	Tm	0.2 M (H_2O)	-20	0.5 mM	5	25
Cyt. *C*	c	4 mM (H_2O)	-20	10 µM	5	25
ADP+ Mg^{2+}	D	0.5 M (H_2O)	-80	1 - 5 mM	4 - 20	10
ATP+ Mg^{2+}	T	0.5 M (H_2O)	-80	1 - 5 mM	4 - 20	10
Uncoupler						
FCCP[1]	F	1 mM (EtOH)	-20	0.5 µM steps	1 µl steps	10
FCCP-MiR06	F	0.1 mM (EtOH)	-20	0.05 µM steps	1 µl steps	10
Inhibitors						
Rotenone	Rot	1.0 or 0.2 mM (EtOH)	-20	0.5 or 0.1 µM	1	10
Malonic acid	Mna	2 M (H_2O)	fresh	5 mM	5	25
Antimycin A	Ama	5 mM (EtOH)	-20	2.5 µM	1	10
Myxothiazol	Myx	1 mM (EtOH)	-20	0.5 µM	1	10
Sodium azide	Azd	4 M (H_2O)	-20	≥100 mM	≥50	50
KCN	Kcn	1 M (H_2O)	fresh	1.0 mM	2	10
Oligomycin	Omy	4 mg/ml (EtOH)	-20	2 µg/ml	1	10
Atractyloside	Atr	50 mM (H_2O)	-20	0.75 mM	30	50
Cell perm.						
Digitonin	Dig	10 mg/ml (DMSO)	-20	10 µg·10^{-6} cells	1µl 10^{-6} cells	10
Other						
Catalase	Ctl	112,000 IU/ml (MiR05)	-20	280 IU/ml	5	25
Ionomycin	Imy	0.5 mg/ml (EtOH)	-20	0.5 µg/ml	2	10

[1]Higher FCCP concentration: in various culture media (e.g. RPMI, DMEM) and for TIP2k.