



Nucleus Protocols

Make Small Molecule Mix — Bill of Materials

Name	Category	Product	Manufacturer	Part #	Price	Storage	Link
Potassium Hydroxide	Salts	Potassium hydroxide - ACS reagent, ≥85%, pellets	Sigma-Aldrich	221473-1KG	\$99.90	4 °C to 30 °C	link
Hydrochloric acid (1 M)	Salts	Hydrochloric acid 1 N, Reagent Grade, 500 mL	VWR	E447-500L	\$72.46	4 °C to 30 °C	link
HEPES	Salts	HEPES, Crystalline Powder, ≥99.5% (titration), Poly bottle	Sigma-Aldrich	H3375-500G	\$431	4 °C to 30 °C	link
Potassium Glutamate	Salts	L- Glutamic acid potassium monohydrate	Sigma-Aldrich	G1501-100G	\$74.80	4 °C to 30 °C	link
Magnesium acetate	Salts	Magnesium acetate tetrahydrate	Sigma-Aldrich	M0631-100G	\$34.80	4 °C to 30 °C	link
rATP	NTP	Adenosine 5'-triphosphate disodium salt hydrate, BioXtra, ≥99% (HPLC)	Sigma-Aldrich	A7699-1G	\$125.00	-25 °C to -15 °C	link
rGTP	NTP	Guanosine 5'-triphosphate sodium salt hydrate, ≥95% (HPLC), powder	Sigma-Aldrich	G8877-100MG	\$155	-25 °C to -15 °C	link
rCTP	NTP	Cytidine 5'-triphosphate disodium salt, ≥95%	Sigma-Aldrich	C1506-100MG	\$102.00	-25 °C to -15 °C	link

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rUTP	NTP	Uridine 5'-triphosphate trisodium salt hydrate, Type IV, ≥93.0% (HPLC)	Sigma-Aldrich	U6750-100MG	\$58.20	-25 °C to -15 °C	link
Creatine phosphate	Reagent	Sodium creatine phosphate dibasic tetrahydrate, ≥98.0%(NT)	Sigma-Aldrich	27920-1G	\$102	-25 °C to -15 °C	link
TCEP-HCl (500 mM)	Reagent	Bond-Breaker® TCEP Neutral Solution, MW 286.65, 5 mL	Thermo Scientific	77720	\$175.65	4 °C to 30 °C	link
Folinic acid	Reagent	Folinic acid calcium salt hydrate	Sigma-Aldrich	F7878-100MG	\$108	4 °C to 30 °C	link
BME	Reagent	2-Mercaptoethanol	Sigma-Aldrich	M6250-100MG	\$65.50	4 °C to 30 °C	link
Spermidine	Reagent	Spermidine, ≥99% (GC)	Sigma-Aldrich	S2626-5G	\$176	-25 °C to -15 °C	link
tRNA	Biologic	Nucleus Total tRNA (50 µg/µL)	b.next	—	—	-25 °C to -15 °C	Make tRNAs
Amino Acids	Biologic	Amino Acid Mix (3.25 mM)	b.next	—	—	-80 °C to -20 °C	Make Amino Acid Mix