ARETERNA
A Synthgene Company

CAP DISCOVERY SET

Below is the IVT condition we used in our own lab to get high yield and high capping efficiency, if you have your own recipe, please feel free to use yours.

Components	Volume	
	Cap3011 Cap5011 Cap2811 Cap3311	Cap3411
Cap Analog	2 μL	2 μL
10xTranscription Buffer*	2 μL	2 μL
100mM ATP Solution	2 μL	1 μL
100mM CTP Solution	2 μL	1 μL
100mM GTP Solution	2 μL	1 μL
100mM NMPUTP Solution	2 μL	1 μL
T7 RNA Polymerase (250U/μL)	1 μL	1 μL
Inorganic Pyrophosphataste (1U/μL)	0.04 μL	0.04 μL
RNase Inhibitor (40U/μL)	1 μL	1 μL
RNase free ddH_2O	up to 20 μL	up to 20 μL
DNA Template	1μg	1-2 μg

***Note on buffer compositions**

CAP3011, CAP5011, CAP3311 and CAP2811 IVT buffer (10x Transcription Buffer): 400mM Tris-HCl, 450 mM $Mg(CH_3COO)_2$, 20mM spermidine, 100mM DTT, pH 7.9 at 25°C.

Cap3411 IVT buffer (10x Transcription Buffer): 400mM Tris-HCl, 250 mM $Mg(CH_3COO)_2$, 20mM spermidine, 100mM DTT, 0.1% Triton X-100, pH 7.9 at 25°C.

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