



# sam\_2025-06-03\_17-52-59\_CFX96-citrate\_synthase.pcrd

6/5/2025 15:01

## Report Information

User: BioRad/sam  
Data File Name: sam\_2025-06-03\_17-52-59\_CFX96-citrate\_synthase.pcrd  
Data File Path: C:\Users\Samb\Downloads\qPCR-20250603  
Well Group Name: All Wells  
Report Differs from Last Save: No

## Run Setup

### Run Information

Run Date: 6/3/2025 17:53  
Run User: sam  
Run Type: User-defined  
Plate File: cgig-02-citrate\_synthase-cfx-plate.pltd  
ID:  
Notes:  
Sample Volume: 20  
Temperature Control Mode: Calculated  
Lid Temperature: 105  
Base Serial Number: CC009827  
Optical Head Serial Number: 785BR3659

### Protocol

- 1: 95.0°C for 0:30
- 2: 95.0°C for 0:03
- 3: 60.0°C for 0:05
- Plate Read
- 4: GOTO 2, 39 more times
- 5: Melt Curve 65.0°C to 95.0°C: Increment 0.5°C 0:05
- Plate Read

### Plate Display

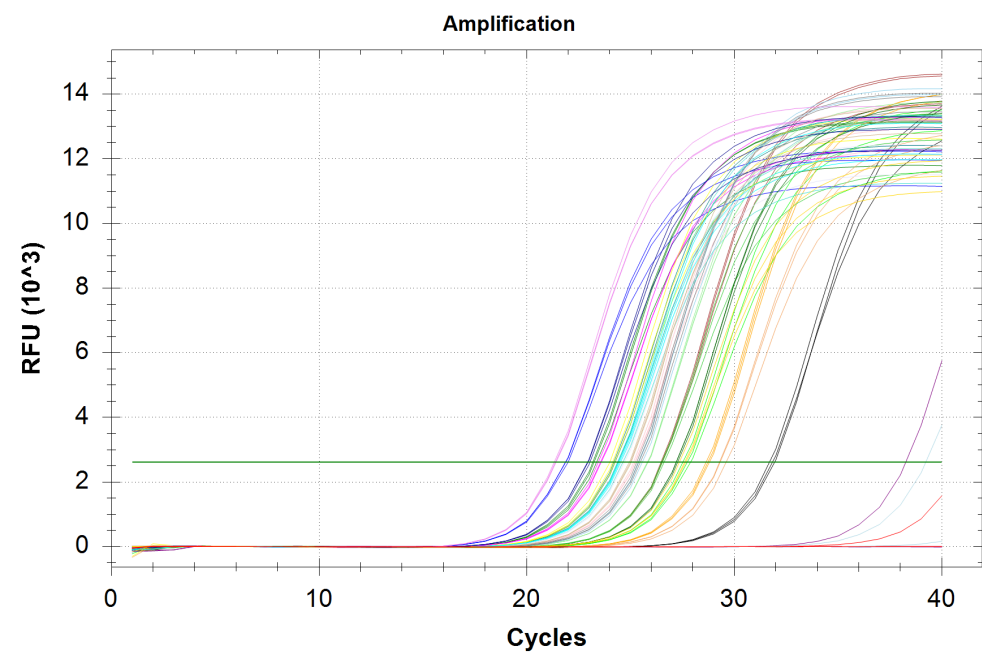
	1	2	3	4	5	6	7	8	9	10	11	12
A	Unk-1 citrate-synthase 12	Unk-1 citrate-synthase 12	Unk-1 citrate-synthase 12	Unk-2 citrate-synthase 14	Unk-2 citrate-synthase 14	Unk-2 citrate-synthase 14	Unk-3 citrate-synthase 15	Unk-3 citrate-synthase 15	Unk-3 citrate-synthase 15	Unk-4 citrate-synthase 18	Unk-4 citrate-synthase 18	Unk-4 citrate-synthase 18
B	Unk-5 citrate-synthase 19	Unk-5 citrate-synthase 19	Unk-5 citrate-synthase 19	Unk-6 citrate-synthase 24	Unk-6 citrate-synthase 24	Unk-6 citrate-synthase 24	Unk-7 citrate-synthase 25	Unk-7 citrate-synthase 25	Unk-7 citrate-synthase 25	Unk-8 citrate-synthase 29	Unk-8 citrate-synthase 29	Unk-8 citrate-synthase 29
C	Unk-9 citrate-synthase 39	Unk-9 citrate-synthase 39	Unk-9 citrate-synthase 39	Unk-10 citrate-synthase 40	Unk-10 citrate-synthase 40	Unk-10 citrate-synthase 40	Unk-11 citrate-synthase 43	Unk-11 citrate-synthase 43	Unk-11 citrate-synthase 43	Unk-12 citrate-synthase 49	Unk-12 citrate-synthase 49	Unk-12 citrate-synthase 49

Plate Display

	1	2	3	4	5	6	7	8	9	10	11	12
D	Unk-13 citrate-synthase 53	Unk-13 citrate-synthase 53	Unk-13 citrate-synthase 53	Unk-14 citrate-synthase 59	Unk-14 citrate-synthase 59	Unk-14 citrate-synthase 59	Unk-15 citrate-synthase 60	Unk-15 citrate-synthase 60	Unk-15 citrate-synthase 60	Unk-16 citrate-synthase 62	Unk-16 citrate-synthase 62	Unk-16 citrate-synthase 62
E	Unk-17 citrate-synthase 63	Unk-17 citrate-synthase 63	Unk-17 citrate-synthase 63	Unk-18 citrate-synthase 66	Unk-18 citrate-synthase 66	Unk-18 citrate-synthase 66	Unk-19 citrate-synthase 69	Unk-19 citrate-synthase 69	Unk-19 citrate-synthase 69	Unk-20 citrate-synthase 71	Unk-20 citrate-synthase 71	Unk-20 citrate-synthase 71
F	Unk-21 citrate-synthase 73	Unk-21 citrate-synthase 73	Unk-21 citrate-synthase 73	Unk-22 citrate-synthase 75	Unk-22 citrate-synthase 75	Unk-22 citrate-synthase 75	Unk-23 citrate-synthase 79	Unk-23 citrate-synthase 79	Unk-23 citrate-synthase 79	Unk-24 citrate-synthase 81	Unk-24 citrate-synthase 81	Unk-24 citrate-synthase 81
G	Unk-25 citrate-synthase 89	Unk-25 citrate-synthase 89	Unk-25 citrate-synthase 89	NTC-1 citrate-synthase	NTC-1 citrate-synthase	NTC-1 citrate-synthase						
H												

Quantification

Step #: 3  
Analysis Mode: Fluorophore  
Cq Determination: Single Threshold  
Baseline Method:  
SYBR: Auto Calculated  
Threshold Setting:  
SYBR: 2611.34, Auto Calculated



Quantification Data

Well	Fluor	Target	Content	Sample	Cq	Cq Mean	Cq Std. Dev
A01	SYBR	citrate-synthase	Unkn-01	12	27.89	27.71	0.186
A02	SYBR	citrate-synthase	Unkn-01	12	27.73	27.71	0.186
A03	SYBR	citrate-synthase	Unkn-01	12	27.52	27.71	0.186
A04	SYBR	citrate-synthase	Unkn-02	14	N/A	0.00	0.000
A05	SYBR	citrate-synthase	Unkn-02	14	38.26	38.26	0.000

## Quantification Data

Well	Fluor	Target	Content	Sample	Cq	Cq Mean	Cq Std. Dev
A06	SYBR	citrate-synthase	Unkn-02	14	N/A	0.00	0.000
A07	SYBR	citrate-synthase	Unkn-03	15	23.18	23.26	0.091
A08	SYBR	citrate-synthase	Unkn-03	15	23.24	23.26	0.091
A09	SYBR	citrate-synthase	Unkn-03	15	23.36	23.26	0.091
A10	SYBR	citrate-synthase	Unkn-04	18	21.86	21.91	0.071
A11	SYBR	citrate-synthase	Unkn-04	18	21.88	21.91	0.071
A12	SYBR	citrate-synthase	Unkn-04	18	21.99	21.91	0.071
B01	SYBR	citrate-synthase	Unkn-05	19	25.22	25.20	0.046
B02	SYBR	citrate-synthase	Unkn-05	19	25.23	25.20	0.046
B03	SYBR	citrate-synthase	Unkn-05	19	25.14	25.20	0.046
B04	SYBR	citrate-synthase	Unkn-06	24	26.53	26.50	0.032
B05	SYBR	citrate-synthase	Unkn-06	24	26.47	26.50	0.032
B06	SYBR	citrate-synthase	Unkn-06	24	26.51	26.50	0.032
B07	SYBR	citrate-synthase	Unkn-07	25	31.94	31.82	0.126
B08	SYBR	citrate-synthase	Unkn-07	25	31.69	31.82	0.126
B09	SYBR	citrate-synthase	Unkn-07	25	31.84	31.82	0.126
B10	SYBR	citrate-synthase	Unkn-08	29	N/A	0.00	0.000
B11	SYBR	citrate-synthase	Unkn-08	29	39.22	39.22	0.000
B12	SYBR	citrate-synthase	Unkn-08	29	N/A	0.00	0.000
C01	SYBR	citrate-synthase	Unkn-09	39	24.38	24.28	0.097
C02	SYBR	citrate-synthase	Unkn-09	39	24.26	24.28	0.097
C03	SYBR	citrate-synthase	Unkn-09	39	24.19	24.28	0.097
C04	SYBR	citrate-synthase	Unkn-10	40	28.80	28.72	0.080
C05	SYBR	citrate-synthase	Unkn-10	40	28.64	28.72	0.080
C06	SYBR	citrate-synthase	Unkn-10	40	28.73	28.72	0.080
C07	SYBR	citrate-synthase	Unkn-11	43	25.84	25.83	0.017
C08	SYBR	citrate-synthase	Unkn-11	43	25.81	25.83	0.017
C09	SYBR	citrate-synthase	Unkn-11	43	25.82	25.83	0.017
C10	SYBR	citrate-synthase	Unkn-12	49	23.45	23.53	0.074
C11	SYBR	citrate-synthase	Unkn-12	49	23.55	23.53	0.074
C12	SYBR	citrate-synthase	Unkn-12	49	23.59	23.53	0.074
D01	SYBR	citrate-synthase	Unkn-13	53	24.24	24.13	0.117
D02	SYBR	citrate-synthase	Unkn-13	53	24.14	24.13	0.117
D03	SYBR	citrate-synthase	Unkn-13	53	24.00	24.13	0.117
D04	SYBR	citrate-synthase	Unkn-14	59	25.57	25.45	0.104
D05	SYBR	citrate-synthase	Unkn-14	59	25.38	25.45	0.104
D06	SYBR	citrate-synthase	Unkn-14	59	25.40	25.45	0.104
D07	SYBR	citrate-synthase	Unkn-15	60	25.38	25.38	0.087
D08	SYBR	citrate-synthase	Unkn-15	60	25.30	25.38	0.087
D09	SYBR	citrate-synthase	Unkn-15	60	25.47	25.38	0.087
D10	SYBR	citrate-synthase	Unkn-16	62	26.50	26.55	0.061
D11	SYBR	citrate-synthase	Unkn-16	62	26.53	26.55	0.061
D12	SYBR	citrate-synthase	Unkn-16	62	26.62	26.55	0.061
E01	SYBR	citrate-synthase	Unkn-17	63	29.60	29.40	0.176
E02	SYBR	citrate-synthase	Unkn-17	63	29.31	29.40	0.176
E03	SYBR	citrate-synthase	Unkn-17	63	29.29	29.40	0.176
E04	SYBR	citrate-synthase	Unkn-18	66	21.38	21.37	0.044
E05	SYBR	citrate-synthase	Unkn-18	66	21.41	21.37	0.044
E06	SYBR	citrate-synthase	Unkn-18	66	21.32	21.37	0.044

Quantification Data

Well	Fluor	Target	Content	Sample	Cq	Cq Mean	Cq Std. Dev
E07	SYBR	citrate-synthase	Unkn-19	69	27.20	27.22	0.038
E08	SYBR	citrate-synthase	Unkn-19	69	27.27	27.22	0.038
E09	SYBR	citrate-synthase	Unkn-19	69	27.20	27.22	0.038
E10	SYBR	citrate-synthase	Unkn-20	71	24.38	24.48	0.140
E11	SYBR	citrate-synthase	Unkn-20	71	24.42	24.48	0.140
E12	SYBR	citrate-synthase	Unkn-20	71	24.64	24.48	0.140
F01	SYBR	citrate-synthase	Unkn-21	73	24.70	24.60	0.099
F02	SYBR	citrate-synthase	Unkn-21	73	24.60	24.60	0.099
F03	SYBR	citrate-synthase	Unkn-21	73	24.51	24.60	0.099
F04	SYBR	citrate-synthase	Unkn-22	75	23.04	22.97	0.061
F05	SYBR	citrate-synthase	Unkn-22	75	22.93	22.97	0.061
F06	SYBR	citrate-synthase	Unkn-22	75	22.95	22.97	0.061
F07	SYBR	citrate-synthase	Unkn-23	79	24.94	24.99	0.046
F08	SYBR	citrate-synthase	Unkn-23	79	25.03	24.99	0.046
F09	SYBR	citrate-synthase	Unkn-23	79	25.00	24.99	0.046
F10	SYBR	citrate-synthase	Unkn-24	81	24.42	24.47	0.050
F11	SYBR	citrate-synthase	Unkn-24	81	24.46	24.47	0.050
F12	SYBR	citrate-synthase	Unkn-24	81	24.52	24.47	0.050
G01	SYBR	citrate-synthase	Unkn-25	89	27.66	27.54	0.164
G02	SYBR	citrate-synthase	Unkn-25	89	27.61	27.54	0.164
G03	SYBR	citrate-synthase	Unkn-25	89	27.35	27.54	0.164
G04	SYBR	citrate-synthase	NTC-01		N/A	0.00	0.000
G05	SYBR	citrate-synthase	NTC-01		N/A	0.00	0.000
G06	SYBR	citrate-synthase	NTC-01		N/A	0.00	0.000

Bar Chart

Normalized expression analysis is not possible, either because no target is assigned as a reference or the selected target(s) is not a

Target Names

Name	Full Name	Reference	Auto Efficiency	Efficiency
citrate-synthase	citrate-synthase	False	Yes	100.0%

Sample Names

Name	Full Name	Control
12	12	No
14	14	No
15	15	No
18	18	No
19	19	No
24	24	No
25	25	No
29	29	No
39	39	No
40	40	No

Sample Names

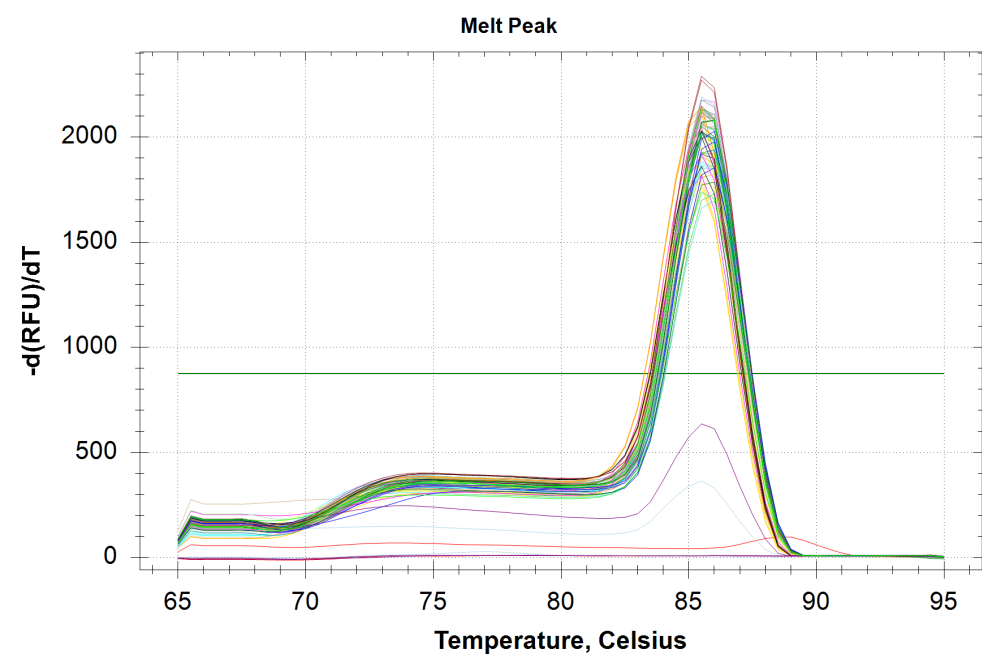
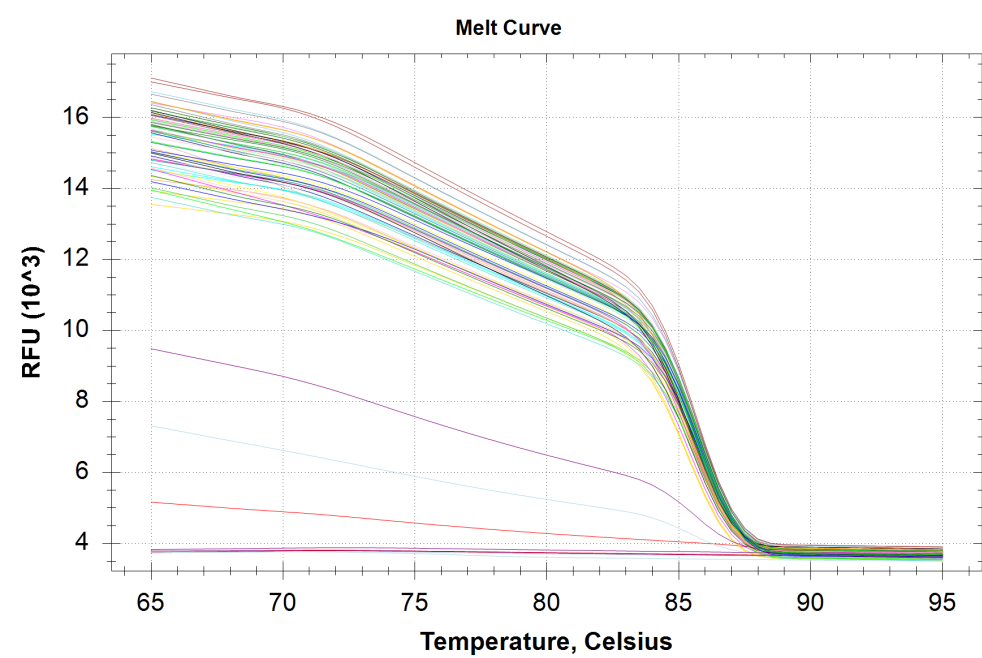
Name	Full Name	Control
43	43	No
49	49	No
53	53	No
59	59	No
60	60	No
62	62	No
63	63	No
66	66	No
69	69	No
71	71	No
73	73	No
75	75	No
79	79	No
81	81	No
89	89	No

Gene Expression - Bar Chart Data

Target	Sample	Control	Expression	Expression SEM	Corrected Expression SEM	Mean Cq	Cq SEM	P-Value
citrate-synthase	12		N/A	N/A	N/A	27.71	0.10714	N/A
citrate-synthase	14		N/A	N/A	N/A	38.26	0.00000	N/A
citrate-synthase	15		N/A	N/A	N/A	23.26	0.05278	N/A
citrate-synthase	18		N/A	N/A	N/A	21.91	0.04109	N/A
citrate-synthase	19		N/A	N/A	N/A	25.20	0.02654	N/A
citrate-synthase	24		N/A	N/A	N/A	26.50	0.01845	N/A
citrate-synthase	25		N/A	N/A	N/A	31.82	0.07294	N/A
citrate-synthase	29		N/A	N/A	N/A	39.22	0.00000	N/A
citrate-synthase	39		N/A	N/A	N/A	24.28	0.05623	N/A
citrate-synthase	40		N/A	N/A	N/A	28.72	0.04606	N/A
citrate-synthase	43		N/A	N/A	N/A	25.83	0.00962	N/A
citrate-synthase	49		N/A	N/A	N/A	23.53	0.04299	N/A
citrate-synthase	53		N/A	N/A	N/A	24.13	0.06747	N/A
citrate-synthase	59		N/A	N/A	N/A	25.45	0.05984	N/A
citrate-synthase	60		N/A	N/A	N/A	25.38	0.05038	N/A
citrate-synthase	62		N/A	N/A	N/A	26.55	0.03498	N/A
citrate-synthase	63		N/A	N/A	N/A	29.40	0.10145	N/A
citrate-synthase	66		N/A	N/A	N/A	21.37	0.02543	N/A
citrate-synthase	69		N/A	N/A	N/A	27.22	0.02219	N/A
citrate-synthase	71		N/A	N/A	N/A	24.48	0.08066	N/A
citrate-synthase	73		N/A	N/A	N/A	24.60	0.05696	N/A
citrate-synthase	75		N/A	N/A	N/A	22.97	0.03531	N/A
citrate-synthase	79		N/A	N/A	N/A	24.99	0.02632	N/A
citrate-synthase	81		N/A	N/A	N/A	24.47	0.02871	N/A
citrate-synthase	89		N/A	N/A	N/A	27.54	0.09493	N/A

Melt Curve

Step #: 5



Melt Curve Data

Well	Fluor	Target	Content	Sample	Melt Temp
A01	SYBR	citrate-synthase	Unkn-01	12	85.50
A02	SYBR	citrate-synthase	Unkn-01	12	85.50
A03	SYBR	citrate-synthase	Unkn-01	12	85.50
A04	SYBR	citrate-synthase	Unkn-02	14	None
A05	SYBR	citrate-synthase	Unkn-02	14	None
A06	SYBR	citrate-synthase	Unkn-02	14	None

## Melt Curve Data

Well	Fluor	Target	Content	Sample	Melt Temp
A07	SYBR	citrate-synthase	Unkn-03	15	86.00
A08	SYBR	citrate-synthase	Unkn-03	15	86.00
A09	SYBR	citrate-synthase	Unkn-03	15	86.00
A10	SYBR	citrate-synthase	Unkn-04	18	86.00
A11	SYBR	citrate-synthase	Unkn-04	18	86.00
A12	SYBR	citrate-synthase	Unkn-04	18	86.00
B01	SYBR	citrate-synthase	Unkn-05	19	85.50
B02	SYBR	citrate-synthase	Unkn-05	19	85.50
B03	SYBR	citrate-synthase	Unkn-05	19	85.50
B04	SYBR	citrate-synthase	Unkn-06	24	85.50
B05	SYBR	citrate-synthase	Unkn-06	24	85.50
B06	SYBR	citrate-synthase	Unkn-06	24	85.50
B07	SYBR	citrate-synthase	Unkn-07	25	85.50
B08	SYBR	citrate-synthase	Unkn-07	25	85.50
B09	SYBR	citrate-synthase	Unkn-07	25	85.50
B10	SYBR	citrate-synthase	Unkn-08	29	None
B11	SYBR	citrate-synthase	Unkn-08	29	None
B12	SYBR	citrate-synthase	Unkn-08	29	None
C01	SYBR	citrate-synthase	Unkn-09	39	86.00
C02	SYBR	citrate-synthase	Unkn-09	39	85.50
C03	SYBR	citrate-synthase	Unkn-09	39	85.50
C04	SYBR	citrate-synthase	Unkn-10	40	85.50
C05	SYBR	citrate-synthase	Unkn-10	40	85.50
C06	SYBR	citrate-synthase	Unkn-10	40	85.50
C07	SYBR	citrate-synthase	Unkn-11	43	85.50
C08	SYBR	citrate-synthase	Unkn-11	43	85.50
C09	SYBR	citrate-synthase	Unkn-11	43	85.50
C10	SYBR	citrate-synthase	Unkn-12	49	85.50
C11	SYBR	citrate-synthase	Unkn-12	49	85.50
C12	SYBR	citrate-synthase	Unkn-12	49	85.50
D01	SYBR	citrate-synthase	Unkn-13	53	85.50
D02	SYBR	citrate-synthase	Unkn-13	53	85.50
D03	SYBR	citrate-synthase	Unkn-13	53	85.50
D04	SYBR	citrate-synthase	Unkn-14	59	85.50
D05	SYBR	citrate-synthase	Unkn-14	59	85.50
D06	SYBR	citrate-synthase	Unkn-14	59	85.50
D07	SYBR	citrate-synthase	Unkn-15	60	85.50
D08	SYBR	citrate-synthase	Unkn-15	60	85.50
D09	SYBR	citrate-synthase	Unkn-15	60	85.50
D10	SYBR	citrate-synthase	Unkn-16	62	85.50
D11	SYBR	citrate-synthase	Unkn-16	62	86.00
D12	SYBR	citrate-synthase	Unkn-16	62	86.00
E01	SYBR	citrate-synthase	Unkn-17	63	86.00
E02	SYBR	citrate-synthase	Unkn-17	63	85.50
E03	SYBR	citrate-synthase	Unkn-17	63	85.50
E04	SYBR	citrate-synthase	Unkn-18	66	85.50
E05	SYBR	citrate-synthase	Unkn-18	66	85.50
E06	SYBR	citrate-synthase	Unkn-18	66	85.50
E07	SYBR	citrate-synthase	Unkn-19	69	85.50
E08	SYBR	citrate-synthase	Unkn-19	69	85.50

Melt Curve Data

Well	Fluor	Target	Content	Sample	Melt Temp
E09	SYBR	citrate-synthase	Unkn-19	69	85.50
E10	SYBR	citrate-synthase	Unkn-20	71	85.50
E11	SYBR	citrate-synthase	Unkn-20	71	86.00
E12	SYBR	citrate-synthase	Unkn-20	71	86.00
F01	SYBR	citrate-synthase	Unkn-21	73	85.50
F02	SYBR	citrate-synthase	Unkn-21	73	85.50
F03	SYBR	citrate-synthase	Unkn-21	73	85.50
F04	SYBR	citrate-synthase	Unkn-22	75	85.50
F05	SYBR	citrate-synthase	Unkn-22	75	85.50
F06	SYBR	citrate-synthase	Unkn-22	75	85.50
F07	SYBR	citrate-synthase	Unkn-23	79	85.50
F08	SYBR	citrate-synthase	Unkn-23	79	85.50
F09	SYBR	citrate-synthase	Unkn-23	79	85.50
F10	SYBR	citrate-synthase	Unkn-24	81	85.50
F11	SYBR	citrate-synthase	Unkn-24	81	85.50
F12	SYBR	citrate-synthase	Unkn-24	81	85.50
G01	SYBR	citrate-synthase	Unkn-25	89	85.50
G02	SYBR	citrate-synthase	Unkn-25	89	85.50
G03	SYBR	citrate-synthase	Unkn-25	89	85.50
G04	SYBR	citrate-synthase	NTC-01		None
G05	SYBR	citrate-synthase	NTC-01		None
G06	SYBR	citrate-synthase	NTC-01		None

QC Parameters

Data

Description	Value	Use	Results	Exclude Wells	All excluded wells
Negative control with a Cq less than	38	True		False	
NTC with a Cq less than	38	True		False	
NRT with a Cq less than	38	True		False	
Positive control with a Cq greater than	30	True		False	
Unknown without a Cq	N/A	True	SYBR:A4, A6, B10, B12.	False	
Standard without a Cq	N/A	True		False	
Efficiency greater than	110.0	True			
Efficiency less than	90.0	True			



Data

Description	Value	Use	Results	Exclude Wells	All excluded wells
Std Curve R^2 less than	0.980	True			
Replicate group Cq Std Dev greater than	0.20	True		False	