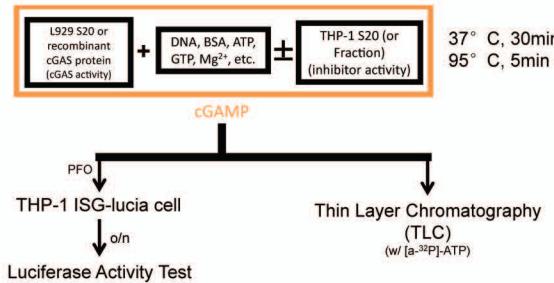
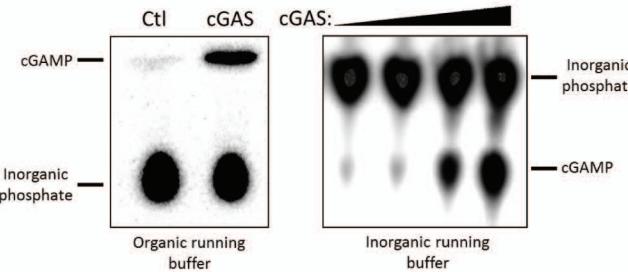


Figure 3-1

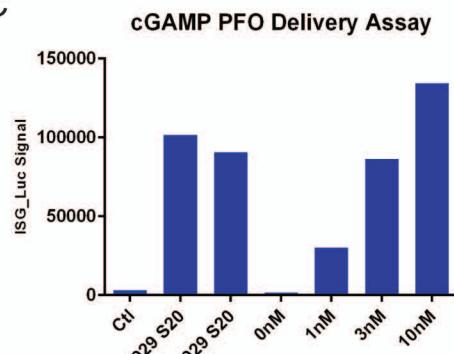
A



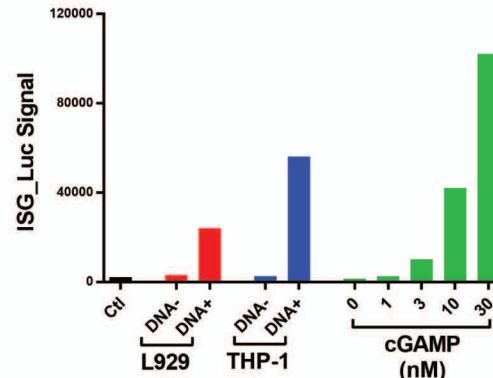
B



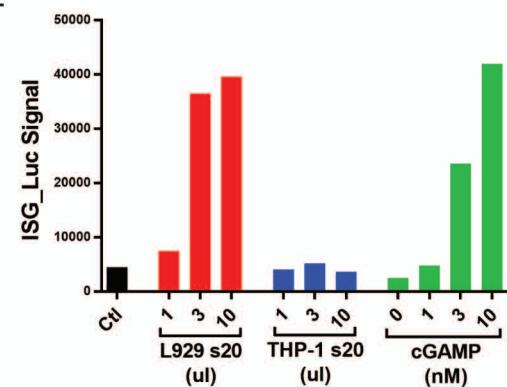
C



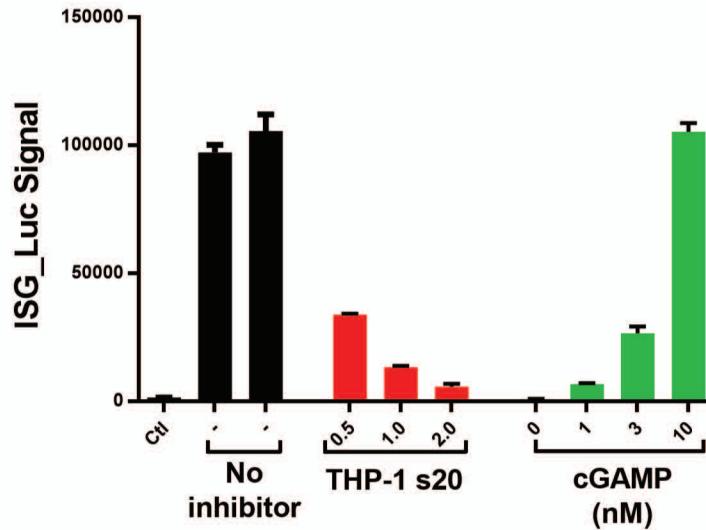
D



E



F



G

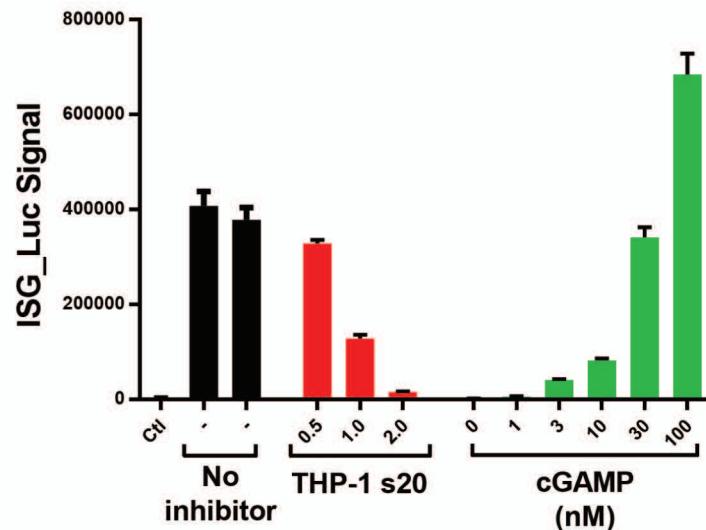
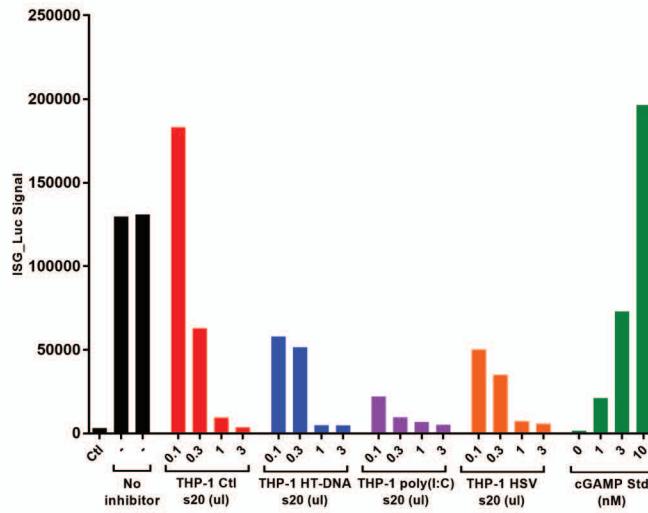
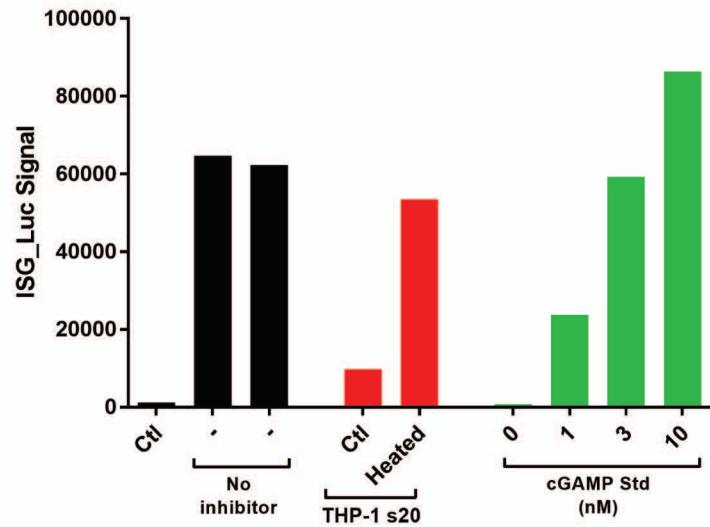


Figure 3-1

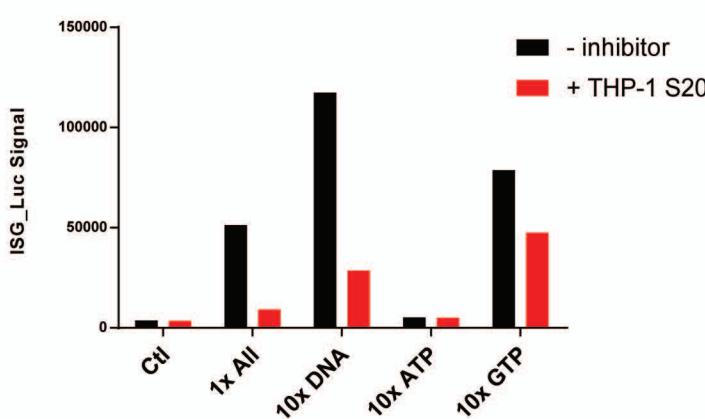
A



B



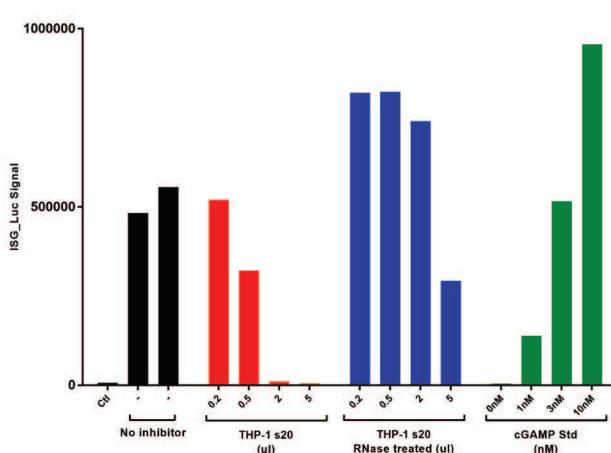
C



D

Purification Method	Activity	Yield	Purification Fold
40% AmSO4 cut	About half in sup, half in pellet	~50%	3-4x
Mono S	FT		~1x
HiTrap Q HP	Bind	~100%	~5x
Mono Q	~70% B	30%	15x
Superose 6	Void Volumn	80%	4x
Phenyl	FT	~60%	1.5x
Blue	FT and 25% B	30%	~4x
CHT	50% B and 100% B	15-20%	50x
Octyl	FT	20%	2x
cGAS affinity	FT	70%	?
ANX FF	100% B	90%	4x
Q FF	100% B	~100%	2x
Heparin HP	FT	<30%	?
Glycerol Gradient (10%~50%)	Bottom	70%	3x

E



F

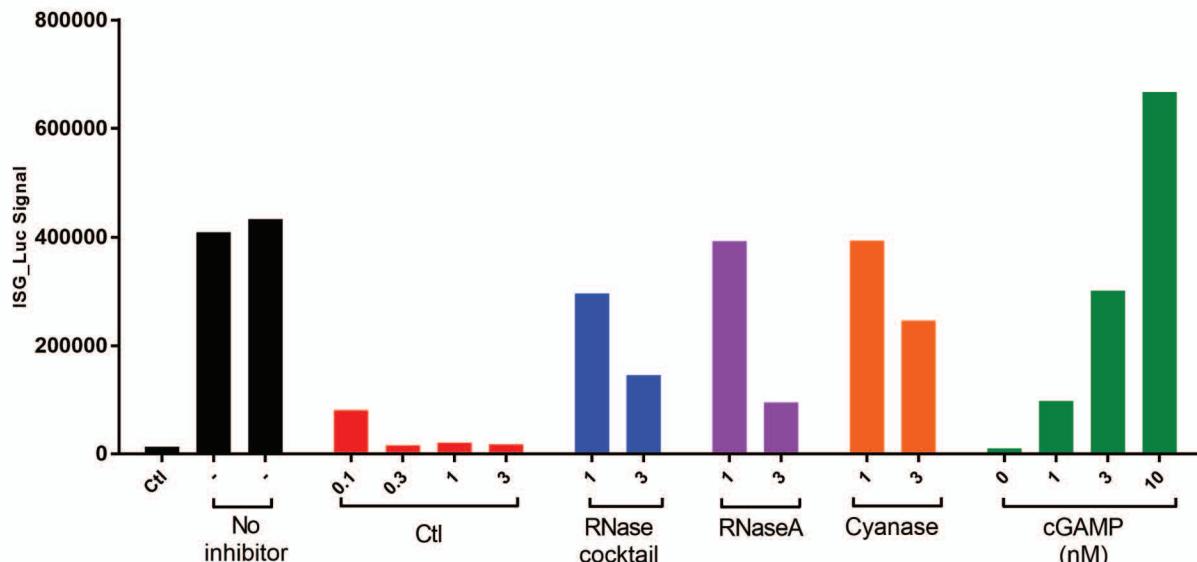
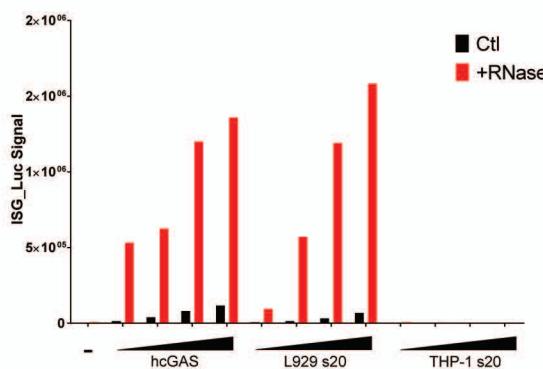
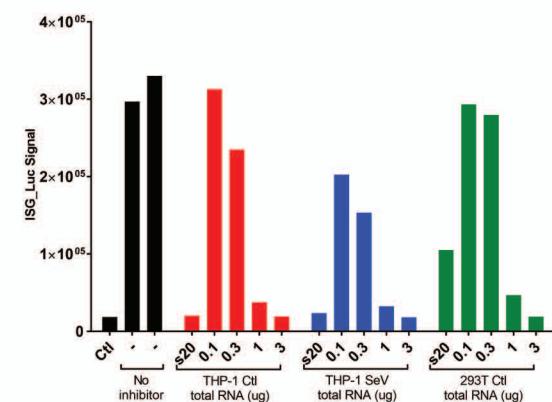


Figure 3-3

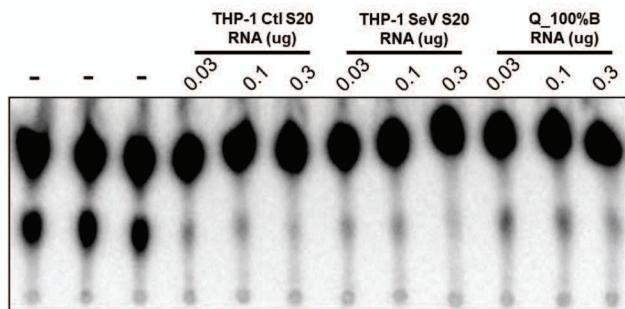
A



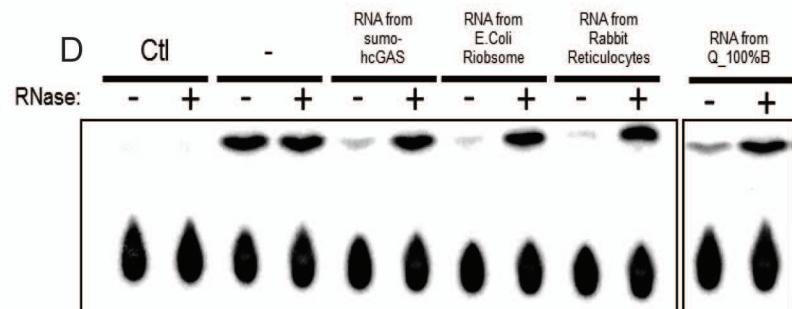
B



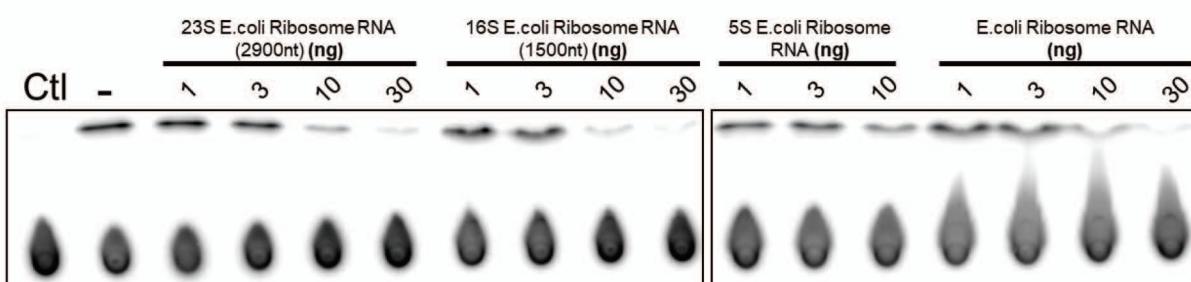
C



D



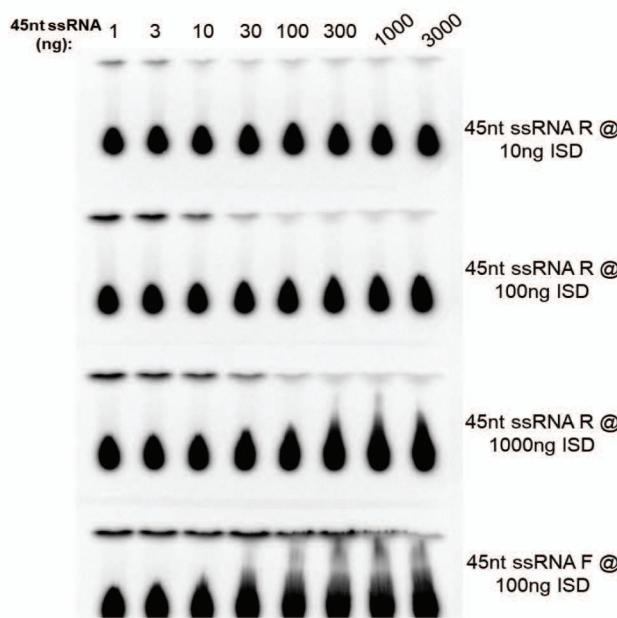
E



F



G



H

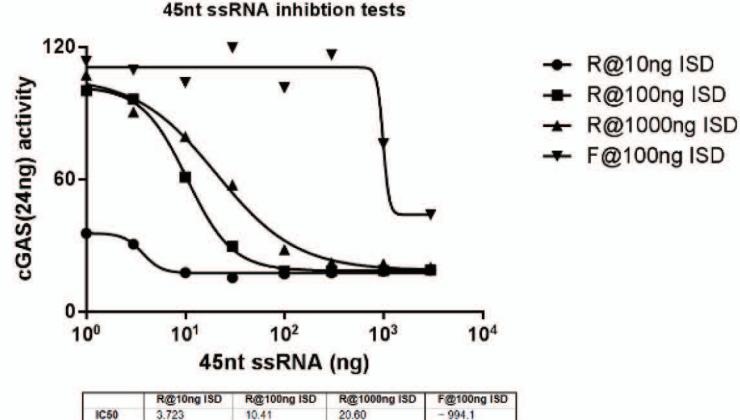
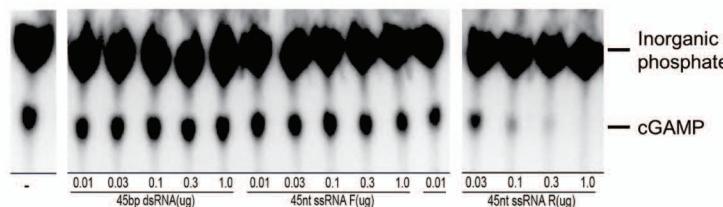


Figure 3-4

A

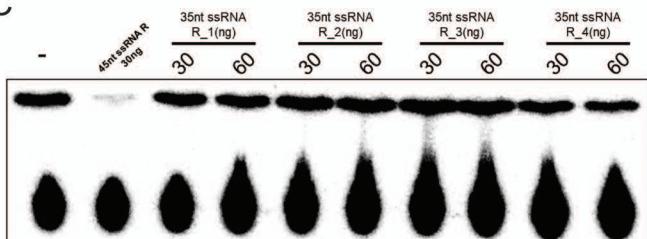


45nt ssRNA F: AAACAAAAACAAAACAACACAACAAACAAAACAAAACAAA

45nt ssRNA R: UUU

45bp dsRNA: annealed from 45nt ssRNA F&R

C



45nt ssRNA R UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU

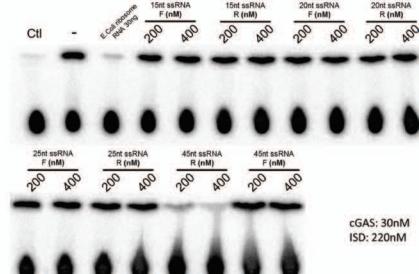
35nt ssRNA R_1 UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU

35nt ssRNA R_2 UUUUUUUUUUGUGUGUGUUUUUUUUUUUUUUUU

35nt ssRNA R_3 UUUUUUUUUUUUUUUUGUGUGUGUUUUUUUUUUUU

35nt ssRNA R_4 UUUUUUUUUUUUUUGUGUGUUUUUUUUUUUUUU

B



cGAS: 30nM

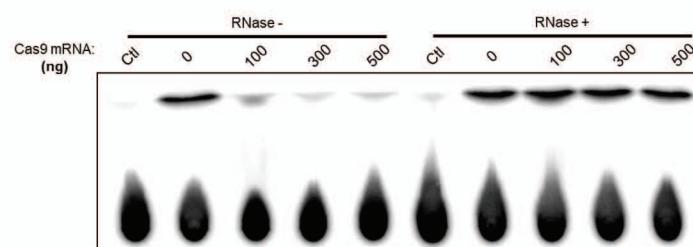
ISD: 220nM

15nt ssRNA F AAACAAAAACAAAAC
15nt ssRNA R GUUUUUGUUUUUUUU
20nt ssRNA F AAAACAAAACAAAACAAA
20nt ssRNA R UGUUUUGUUUUUUUUUU
25nt ssRNA F AAACAAAACAAAACAAA
25nt ssRNA R UGGUGUGGUUUUUUUUU
45nt ssRNA F AAACAAAACAAAACAAA
45nt ssRNA R UUUGUUUUUUUUUUUUUU
45nt ssRNA R UUUGUUUUUUUUUUUUUU

F

Oligo Name	Sequence	Note
RNA_001	UU	
RNA_002	AAAGAAAAAGAAAAGAAAGAGAGAAGAAAAGAAAAGAAA	Change U to A from 001
RNA_003	UUUCUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU	Change G to C from 001
RNA_004 (40nt)	UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU	Shorter version of 001
RNA_007	UUUCUGCUAUUUUAAGAUUUUUAAGUCAGGCCUCUUUCGAUG	AC006946.16 gene, lincRNA
RNA_008	UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU	RP11-410E.1 gene, lincRNA
RNA_009	GGGGAAAAAUUGAAUUUGGCGAACAGCAAUUAUUGCAGGAUUAAGU	HIV-1 pol partial cds
RNA_010	UUUUUUUUUUUAGGGGGUUUUUUUUUUUUUUUUUUUUUUUUUU	MuLV integration site
RNA_011	UUUGUCUACUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU	HIV-1 integration site
RNA_012	GUUCUAAAUGGGCAAGUCAAAUUAUCCAGGAUAAAACAAA	SIV-pol partial cds
16S(575-619)	GCGCACCGAGCGGGGUUGUAGUCAGAUUGUAGAACCCCCGGCG	E.coli 16S rRNA fragment
Alu RNA	UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU	
5S(1-45)	UGCCUGGGGGGUAGCGCGGGGUCCCCAACGGAGCCAGCGCA	
5S(76-120)	GUAGUGUGGGGUUCCCCAACGGAGAGUAGGGACUGCCAGCAU	
16S(1-45)	AAAUGAAGGUUUAUCAUGGCUCAGAUUGAACGCCUGGGCGCAU	

E

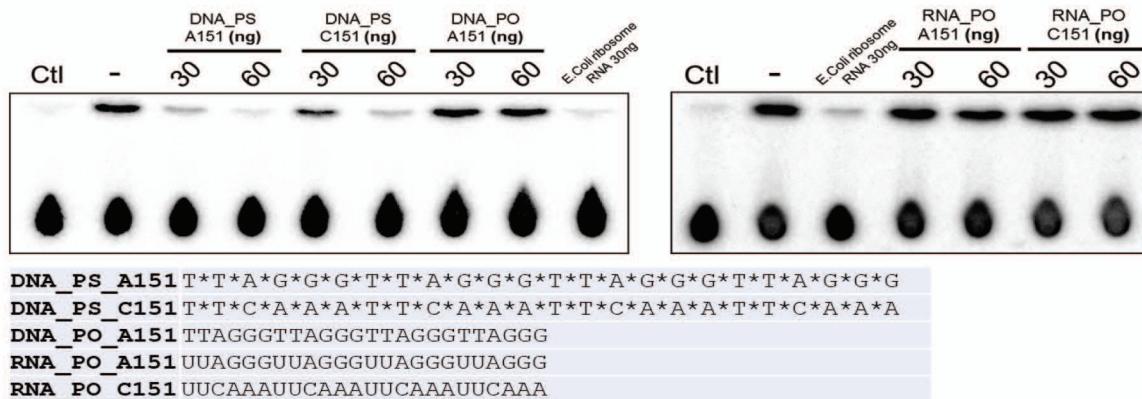


G

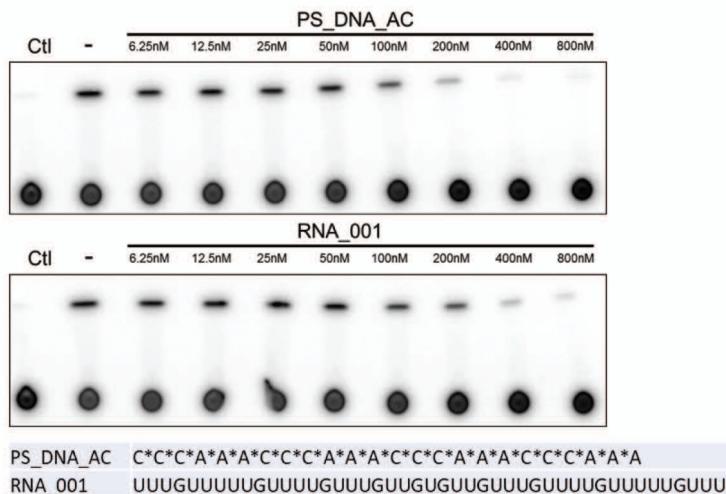


Figure 3-5

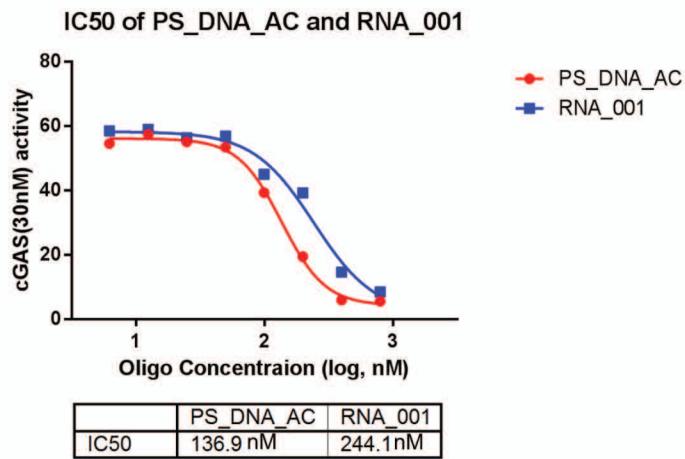
A



B



C



D

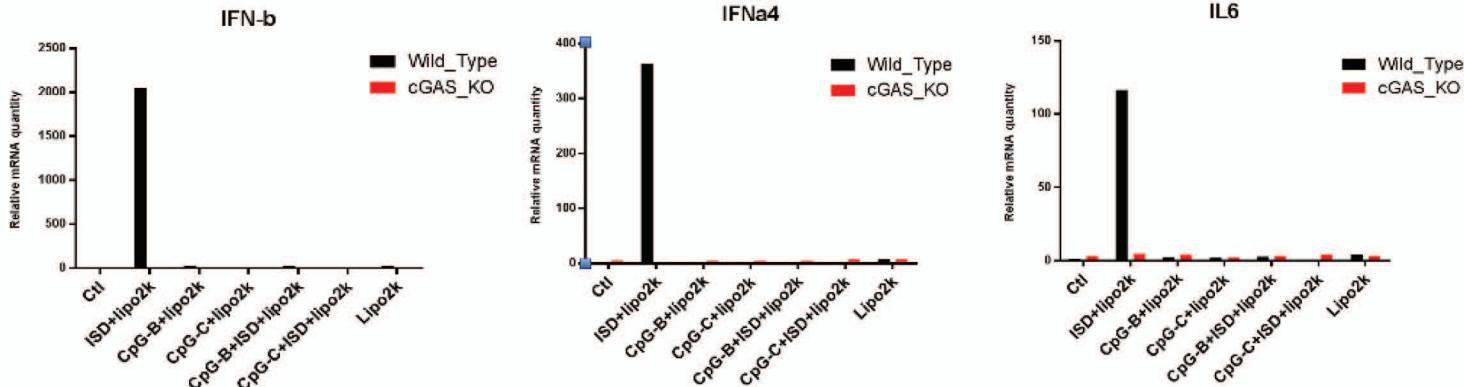


Figure 3-6

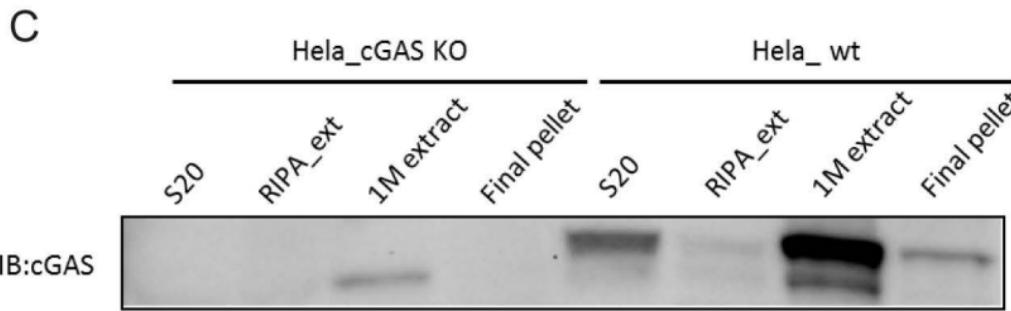
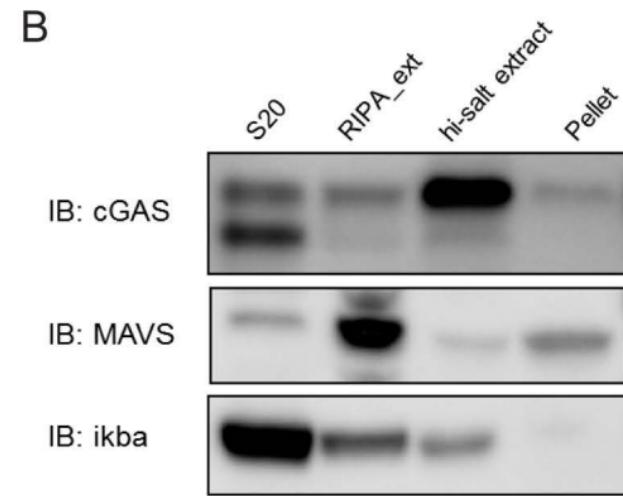
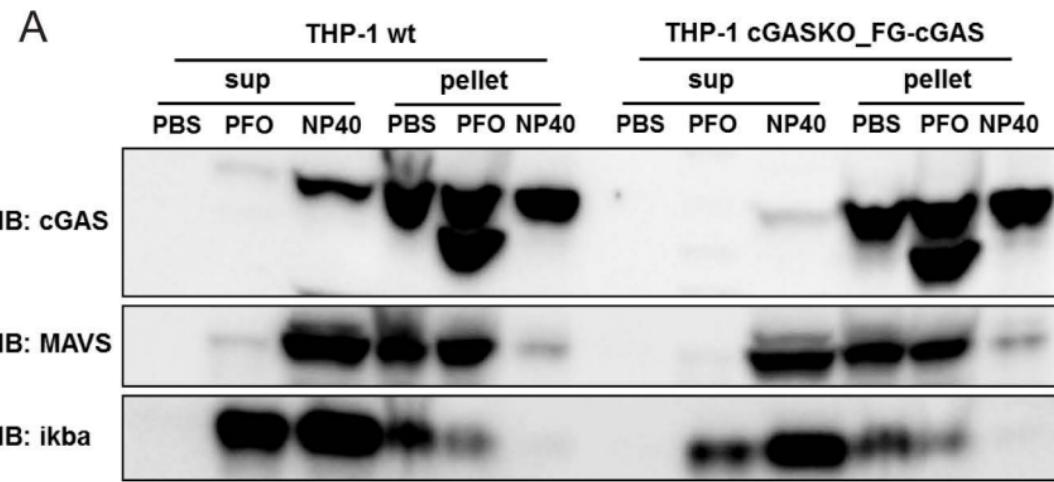
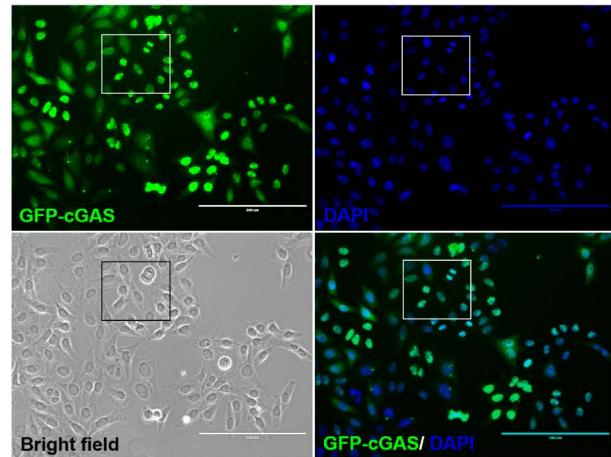


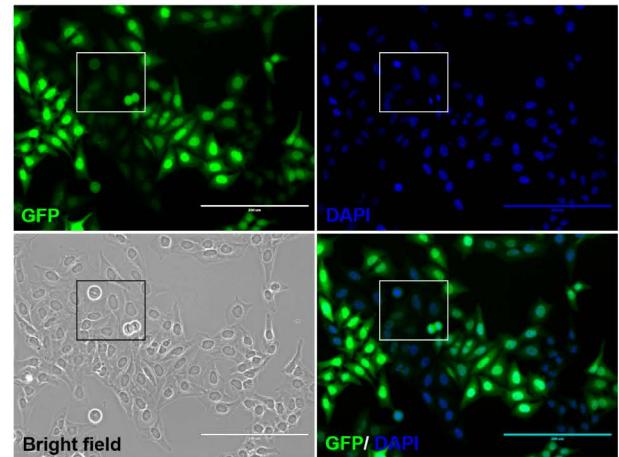
Figure 3-7

A

Hela_GFP-cGAS: Control

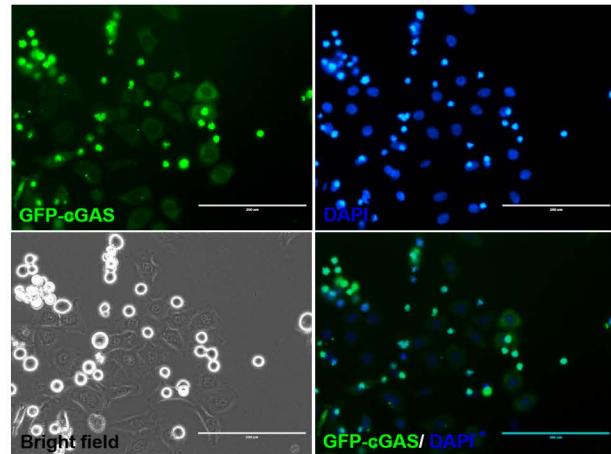


Hela_GFP: Control

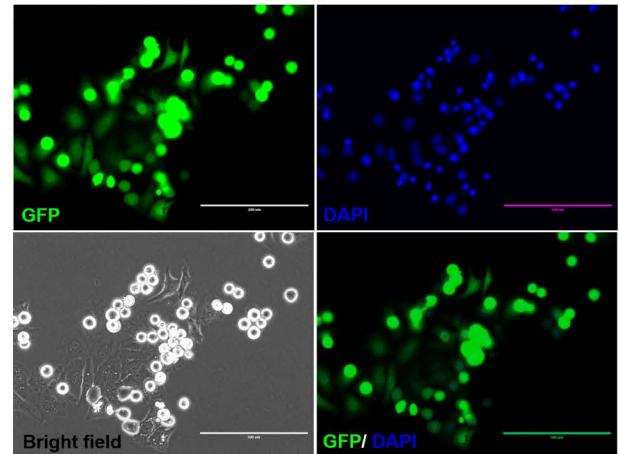


B

Hela_GFP-cGAS: Nocodazole



Hela_GFP: Nocodazole



C

Upper panels: Hela_GFP-cGAS

Lower panels: Hela_GFP

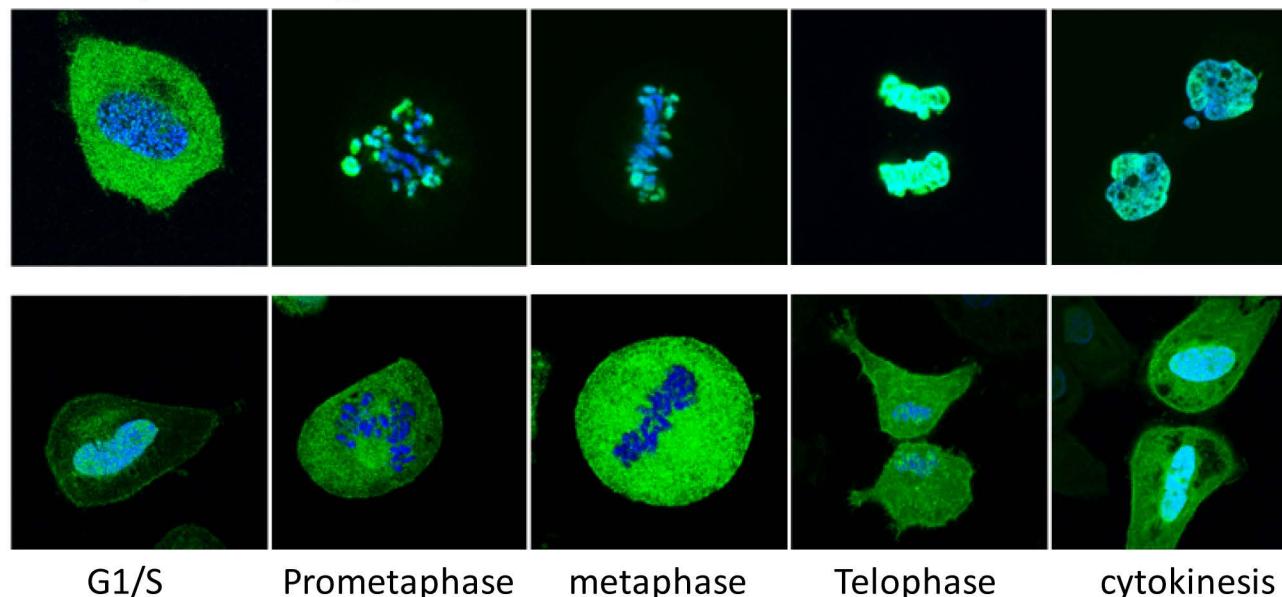
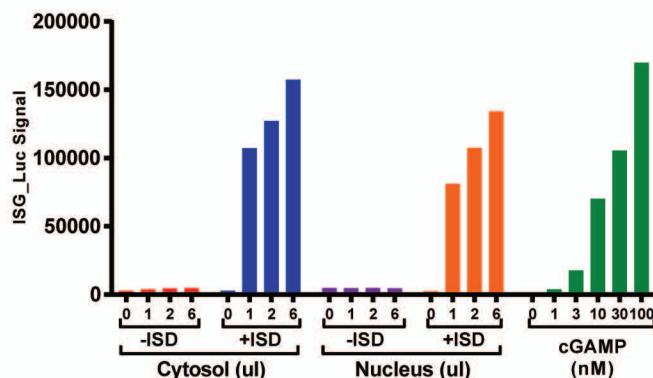
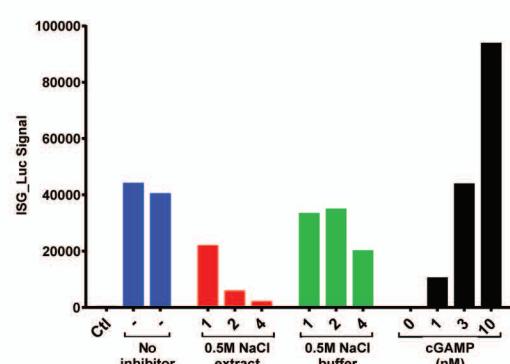


Figure 3-8

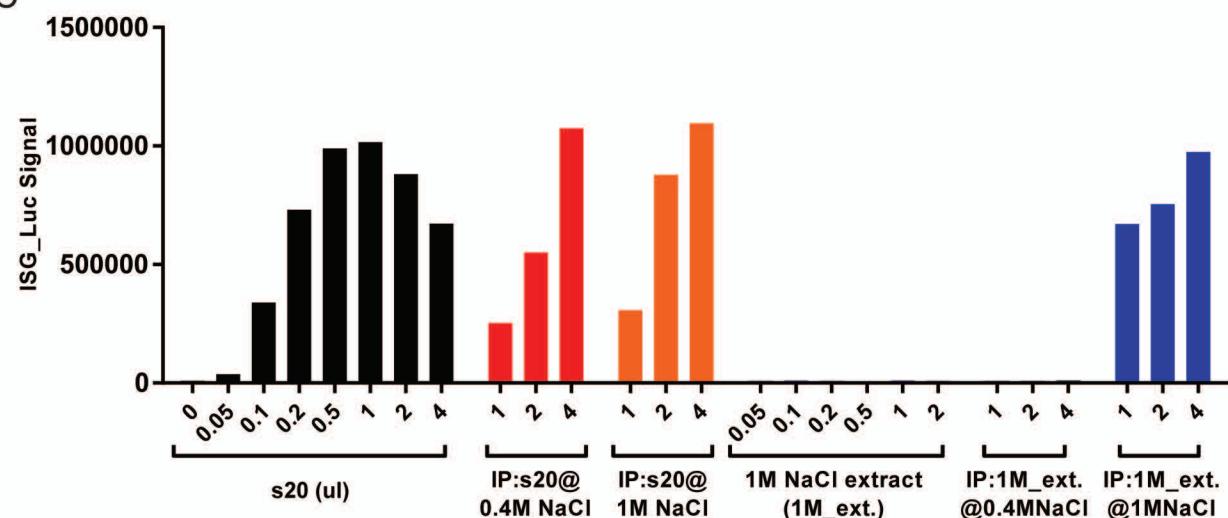
A



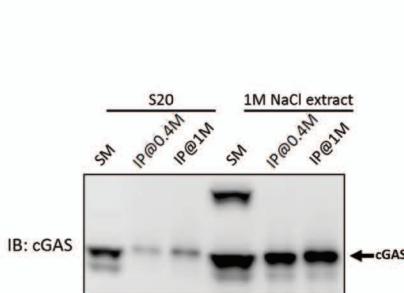
B



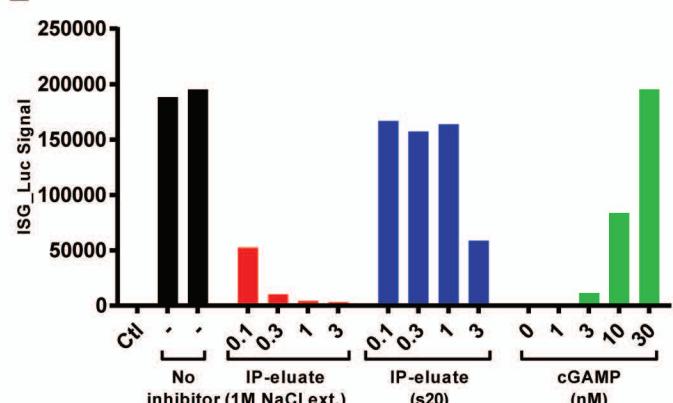
C



D



E



F

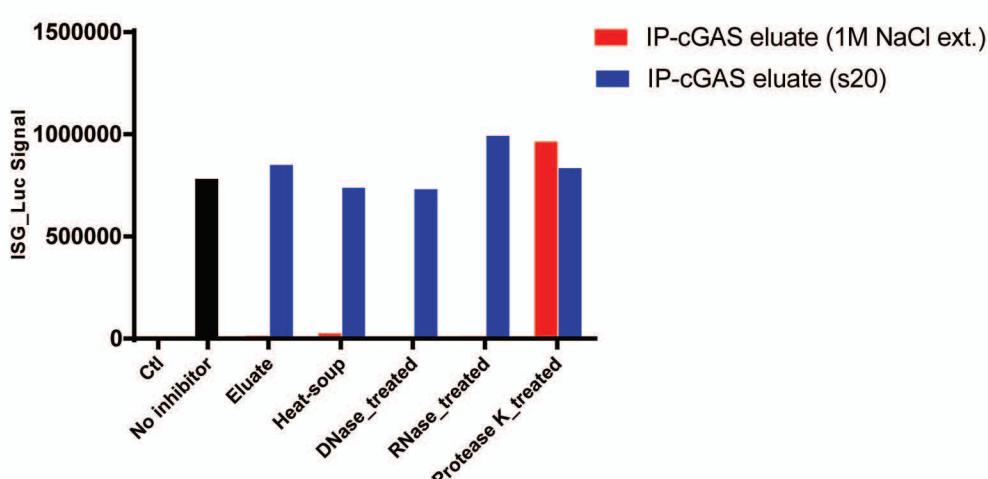


Figure 3-9

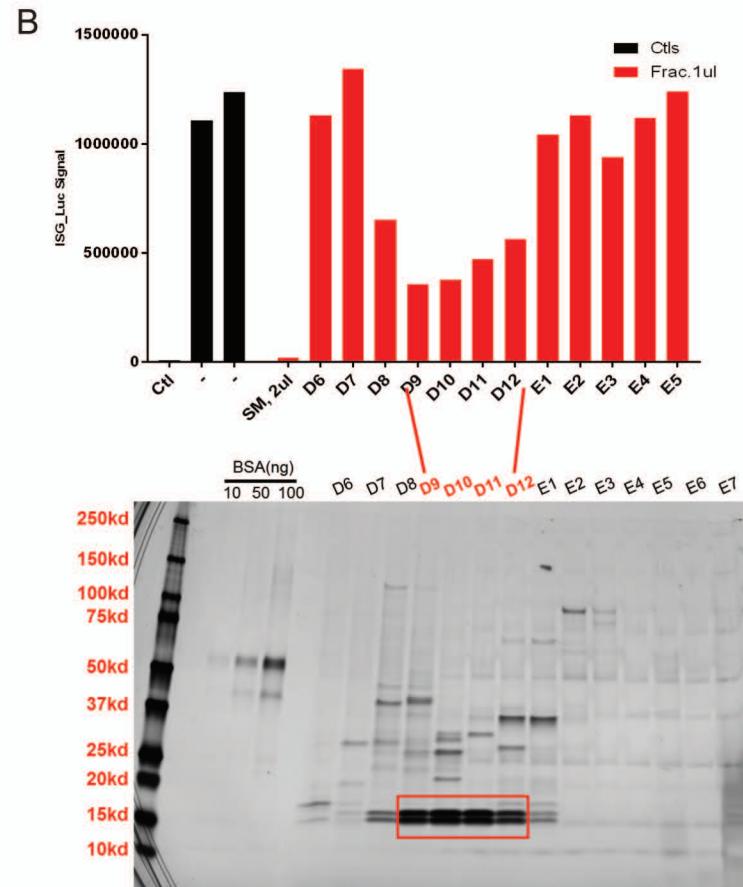
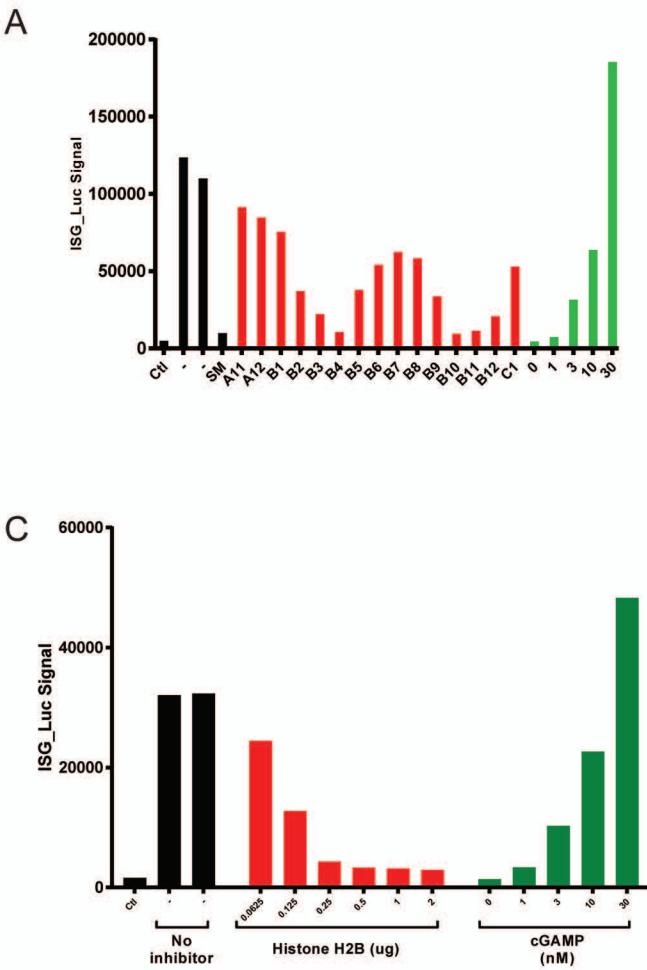
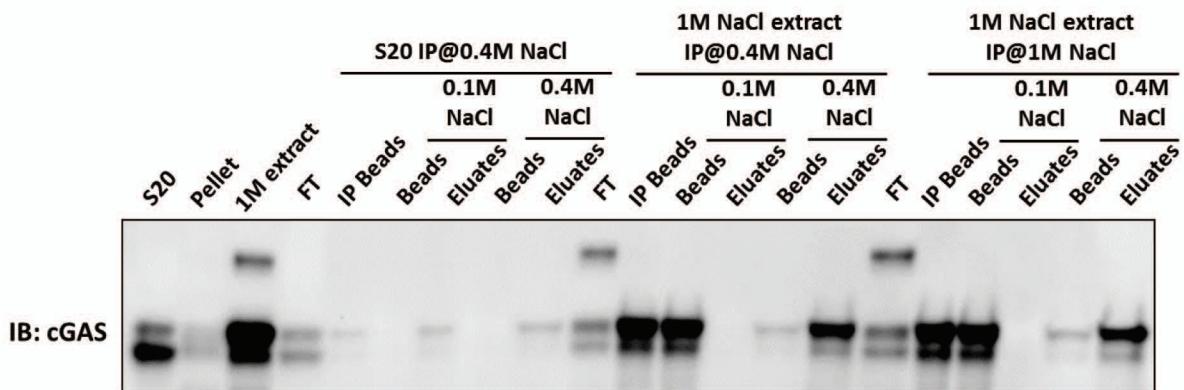
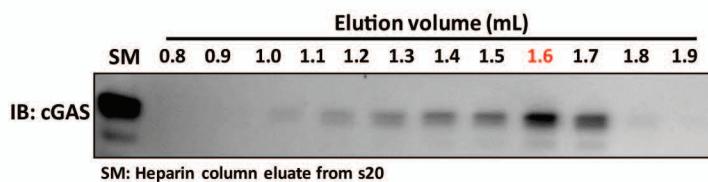


Figure 3-10

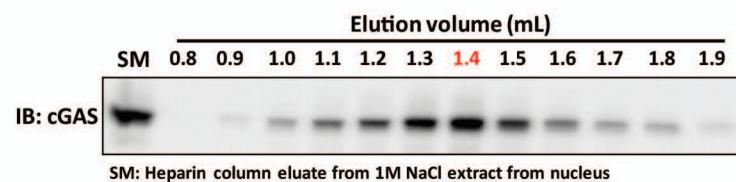
A



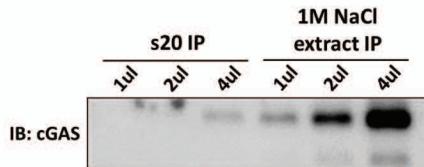
B



C



D



F

cGAS peptides (phospho/total):	
1M NaCl extract cGAS-IP	s20 cGAS-IP
S13: 1/42	S163: 1/4
S23: 1/7	
T35: 3/67	
S37: 14/67	
S64: 4/23	
T68: 2/23	
S94: 2/37	
T97: 2/37	
S98: 4/37	
T130: 2/39	
S143: 5/39	
S163: 0/79	
S213: 1	
Y214: 1	
S305: 2/21	
S329: 4	

E

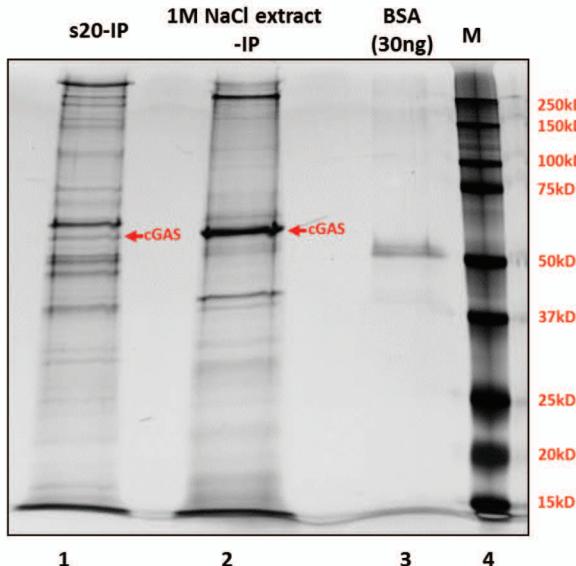
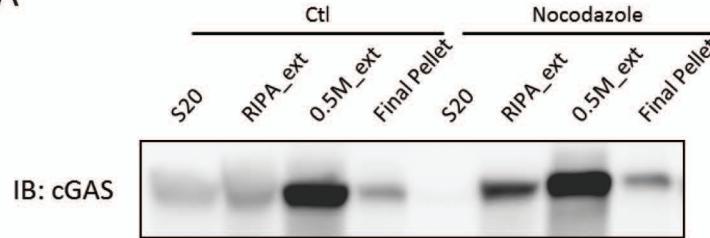
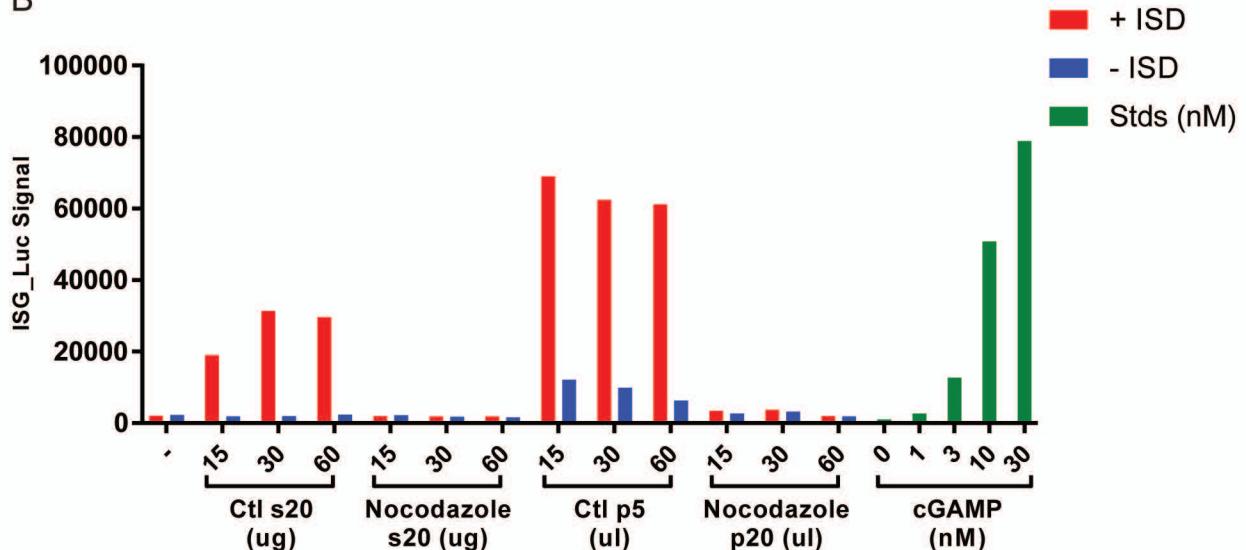


Figure 3-11

A



B



B

