

SEQ ID NO: 14		SUMO-TdT	1	MGSSHHHHHH	Thrombin cleavage site		SUMO fragment			60
		SUMO-TdT	60	KKTTPLRRIM	EAFAKRQKE	MDSLRFLYDG	IRIQADQTP	DLDMEDNDII	EAHREQIGGE	120
SEQ ID NO: 1	SUMO-TdT	121	LMRTDYSATP	NPGFQKTPPL	AVKKISQYAC	QRKTTLNNYN	HIFTDAFEIL	AENSEFFENE	175	180
	Bovine TdT	139	RTDYSATP	NPGFQKTPPL	AVKKISQYAC	QRKTTLNNYN	HIFTDAFEIL	AENSEFFENE	177	196
Amino Acids 139-520 of SEQ ID NO: 12										
		SUMO-TdT	181	VSYVTFMRAA	SVLKSLPFTI	ISMKDTEGIP	CLGDKVKCII	EEIIEIGESS	EVKAVLNDER	240
		Bovine TdT	197	VSYVTFMRAA	SVLKSLPFTI	ISMKDTEGIP	CLGDKVKCII	EEIIEIGESS	EVKAVLNDER	256
		SUMO-TdT	241	YQSFKLFTSV	FGVGLKTSEK	WFRMGFRSLs	IMSDKTLK	TKKQKAGFLY	YEDLVSCVTR	300
		Bovine TdT	257	YQSFKLFTSV	FGVGLKTSEK	WFRMGFRSLs	IMSDKTLK	TKKQKAGFLY	YEDLVSCVTR	316
		SUMO-TdT	301	AEAEAVGVLV	KEAVWAFLPD	AFVTMGGFR	RGKKIGHDVD	FLITSPGSAE	DEEQLLPKVI	360
		Bovine TdT	17	AEAEAVGVLV	KEAVWAFLPD	AFVTMGGFR	RGKKIGHDVD	FLITSPGSAE	DEEQLLPKVI	376
342										
		SUMO-TdT	361	NLWEKKGLLL	YYDLVESTFE	KFKLPSRQVD	TLDHFQKCFL	ILKLHHQRVD	SSKSNQQEGK	420
		Bovine TdT	377	NLWEKKGLLL	YYDLVESTFE	KFKLPSRQVD	TLDHFQKCFL	ILKLHHQRVD	SSKSNQQEGK	436
421										
		SUMO-TdT	421	TWKAIRVDLV	MCPYENRAFA	LLGWTGSRQF	ERDIRRYATH	ERKMMLDNHA	LYDKTKRVFL	480
		Bovine TdT	437	TWKAIRVDLV	MCPYENRAFA	LLGWTGSRQF	ERDIRRYATH	ERKMMLDNHA	LYDKTKRVFL	496
504										
		SUMO-TdT	481	KAEEEEIFA	HLGLDYIEPW	ERNA				
		Bovine TdT	497	KAEEEEIFA	HLGLDYIEPW	ERNA				520

FIG. 1

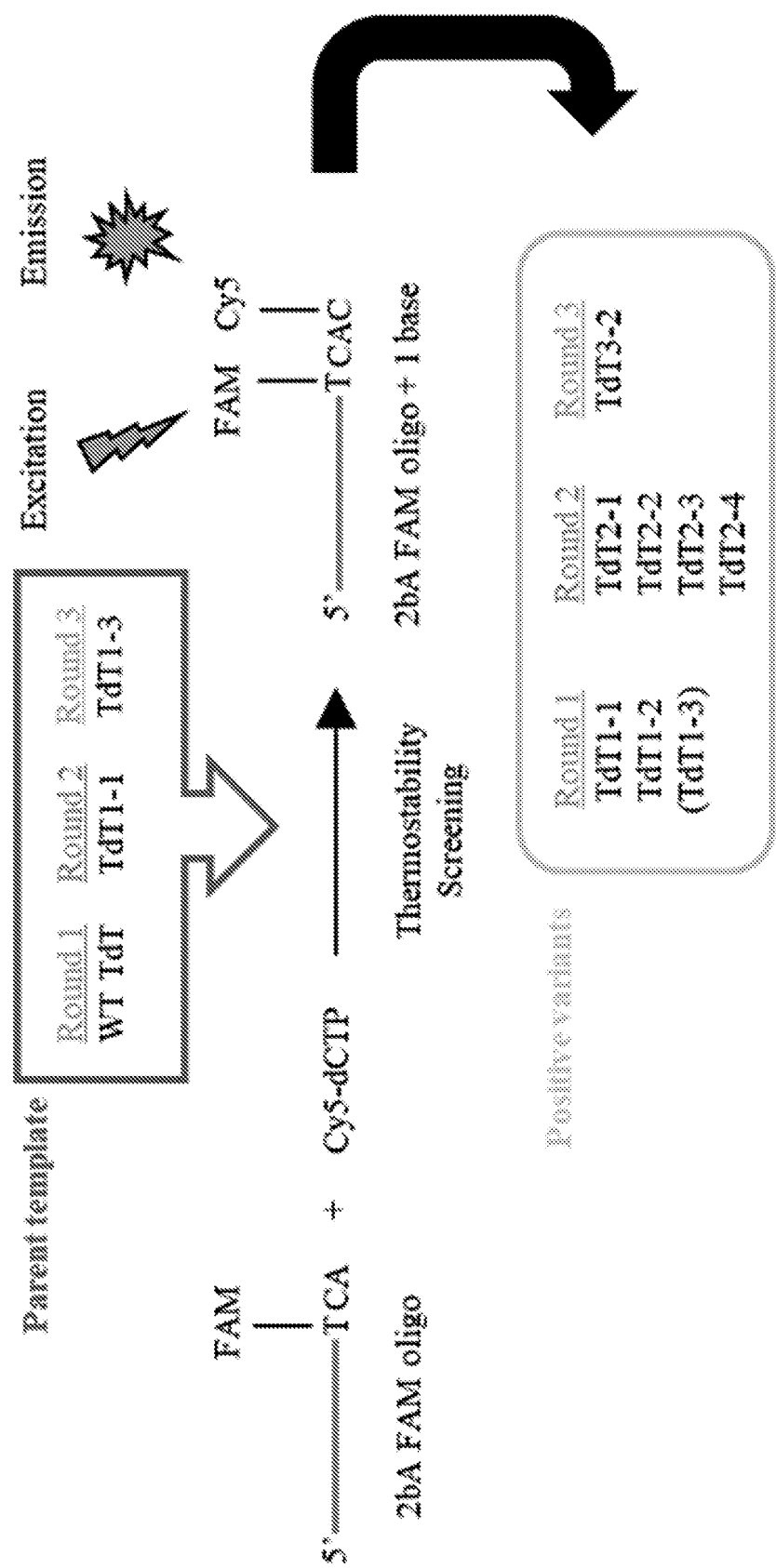


FIG. 2

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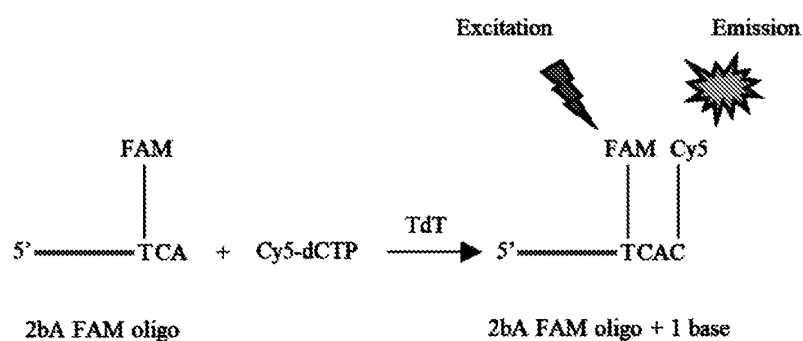
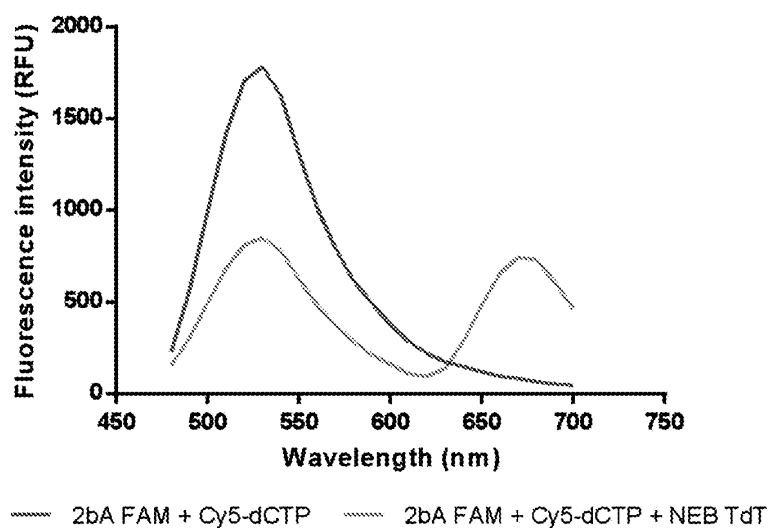
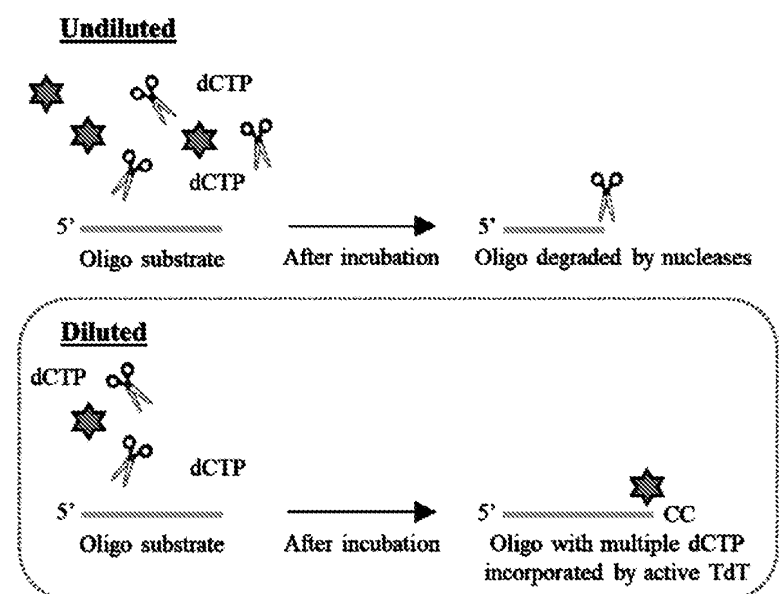
FIG. 3A**FIG. 3B****FIG. 3C**

FIG. 3D

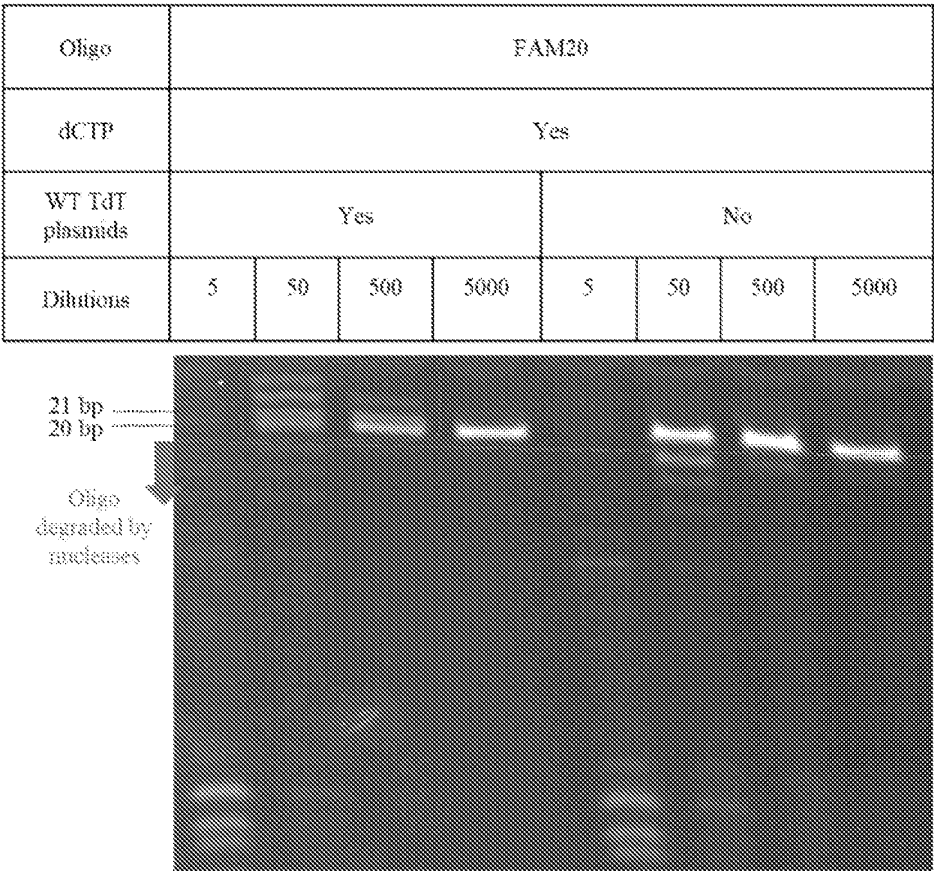


FIG. 3E

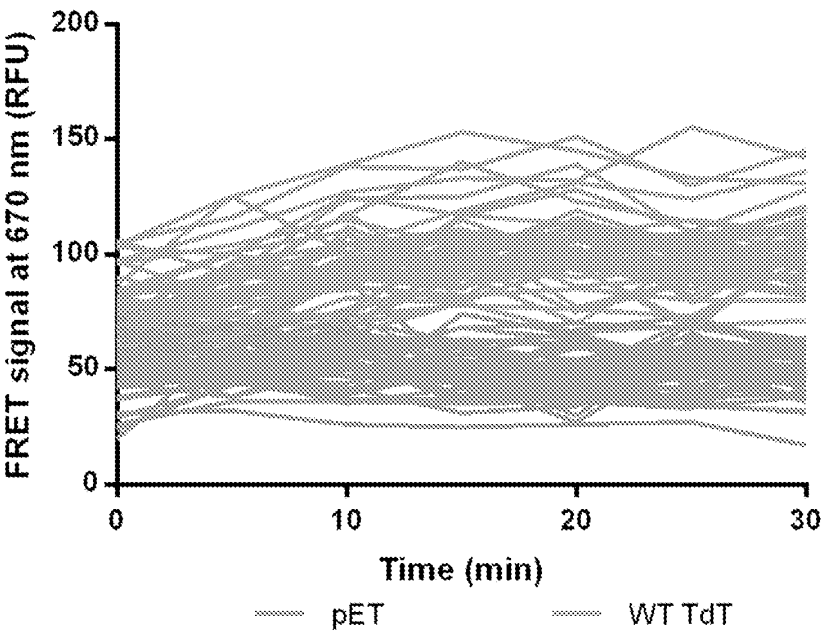


FIG. 4B

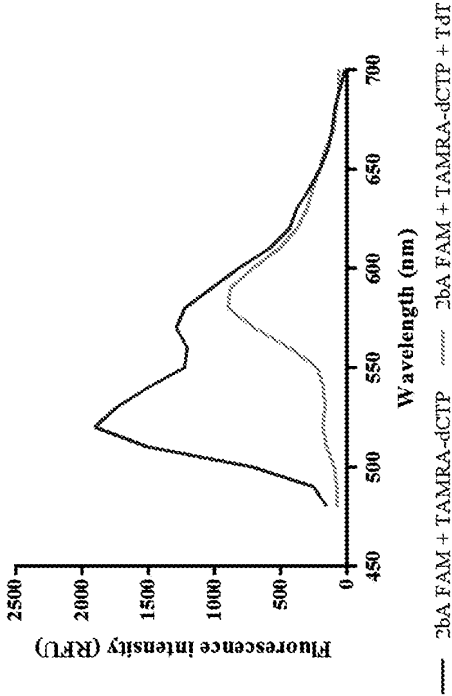


FIG. 4D

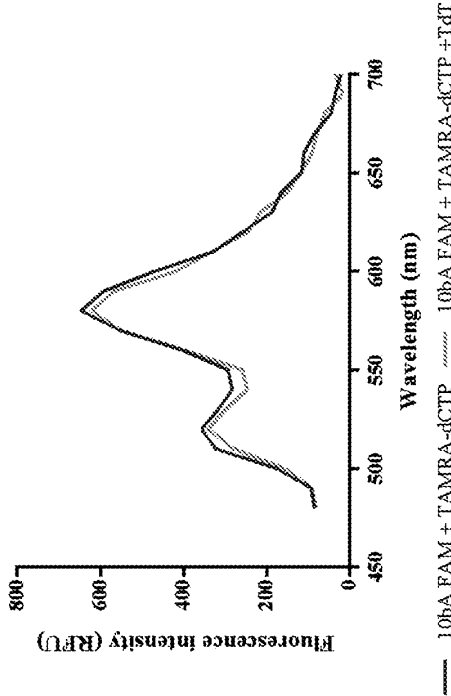


FIG. 4A

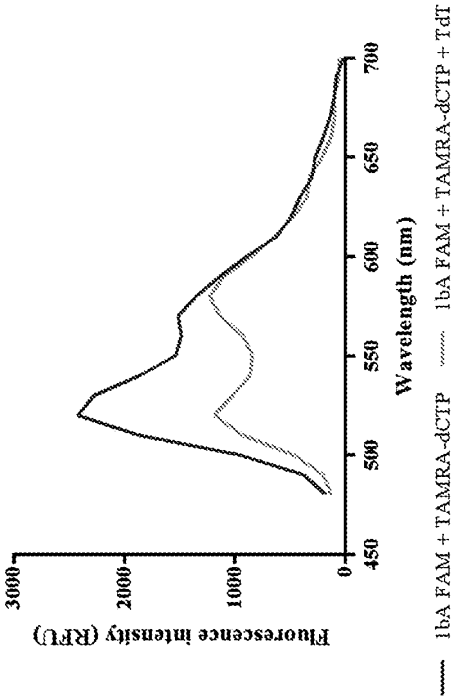


FIG. 4C

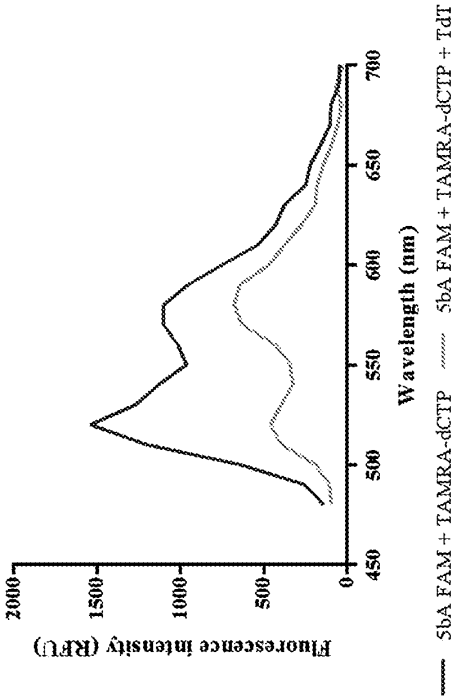


FIG. 5B

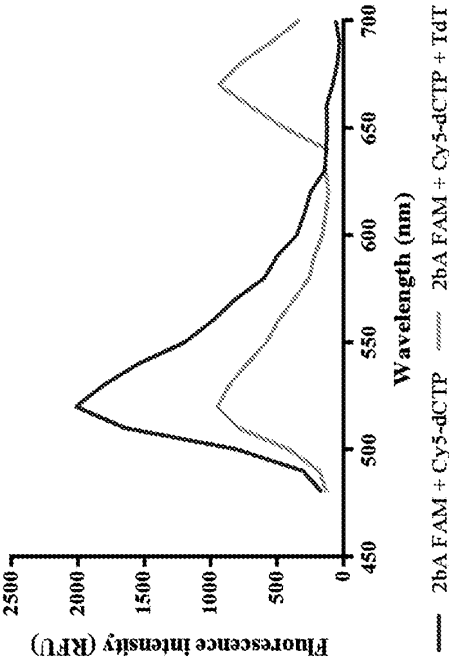


FIG. 5A

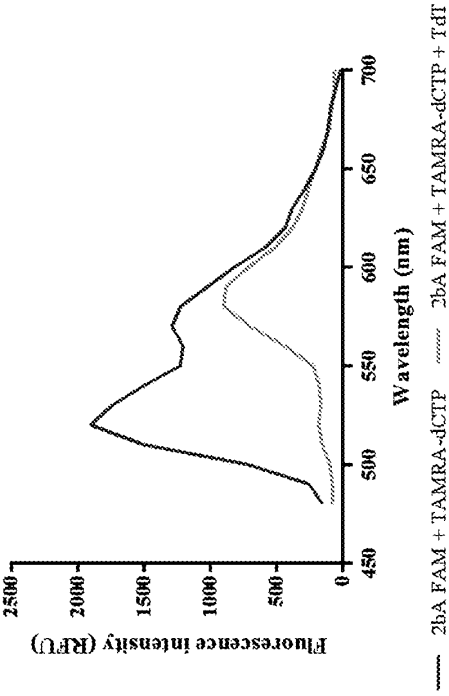
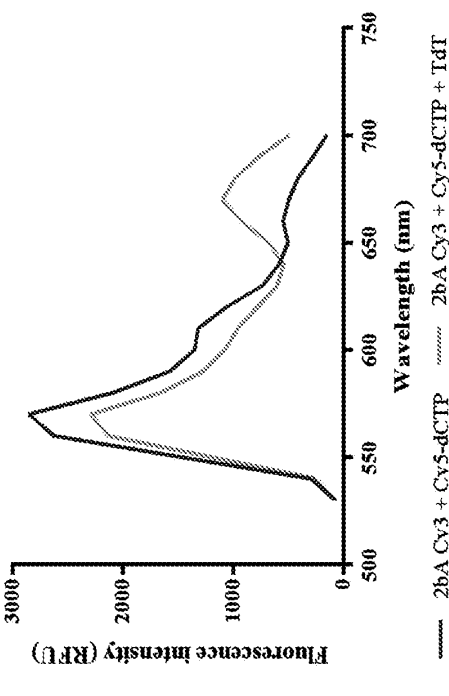


FIG. 5C



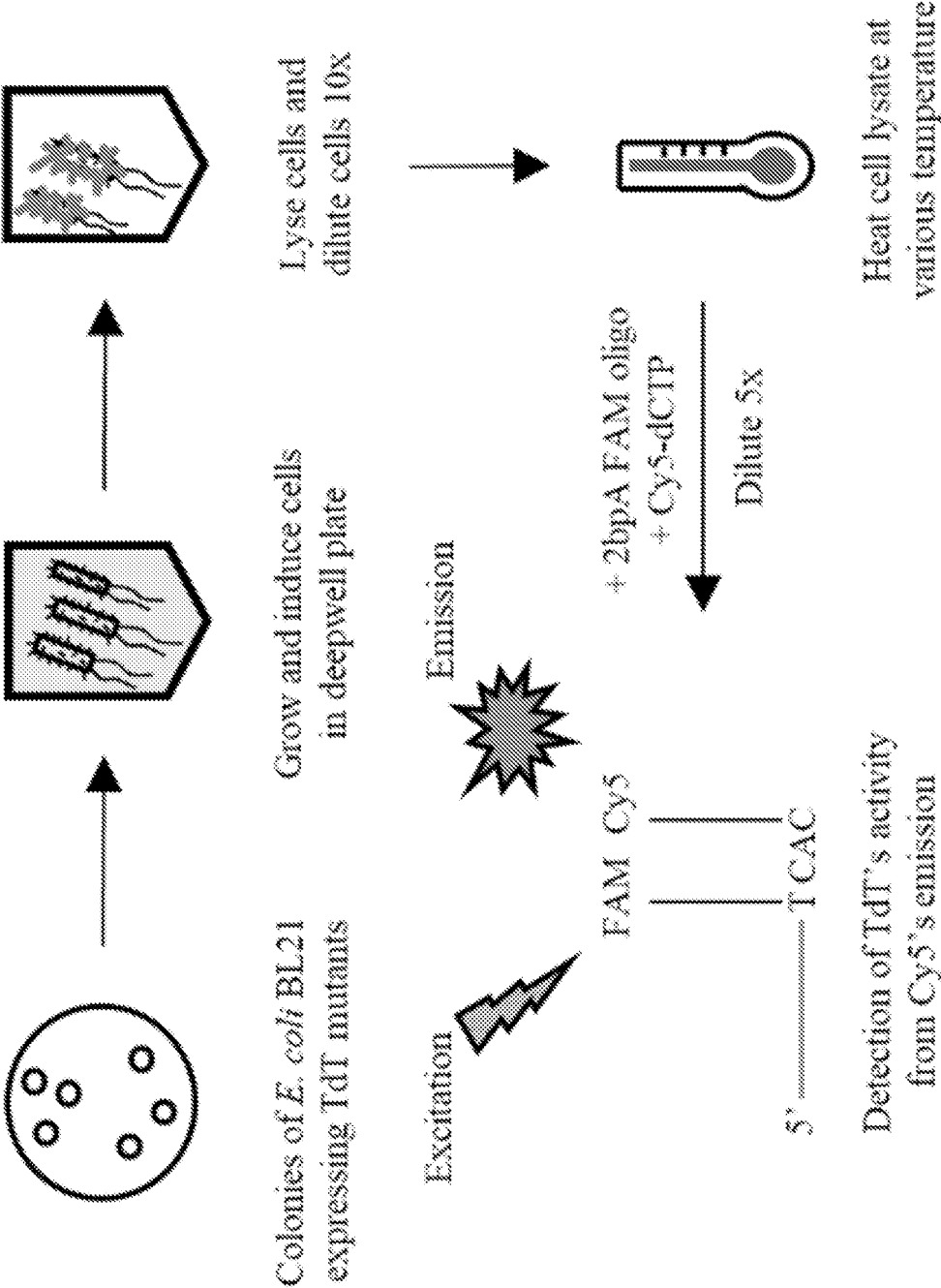


FIG. 6

FIG. 7A

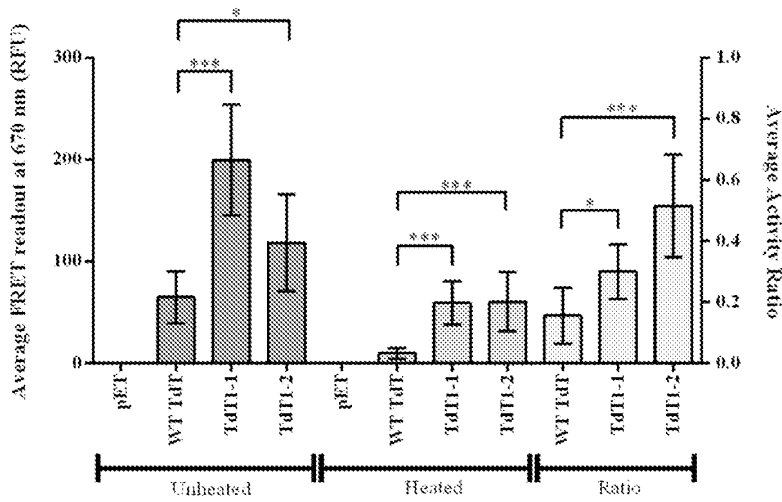


FIG. 7B

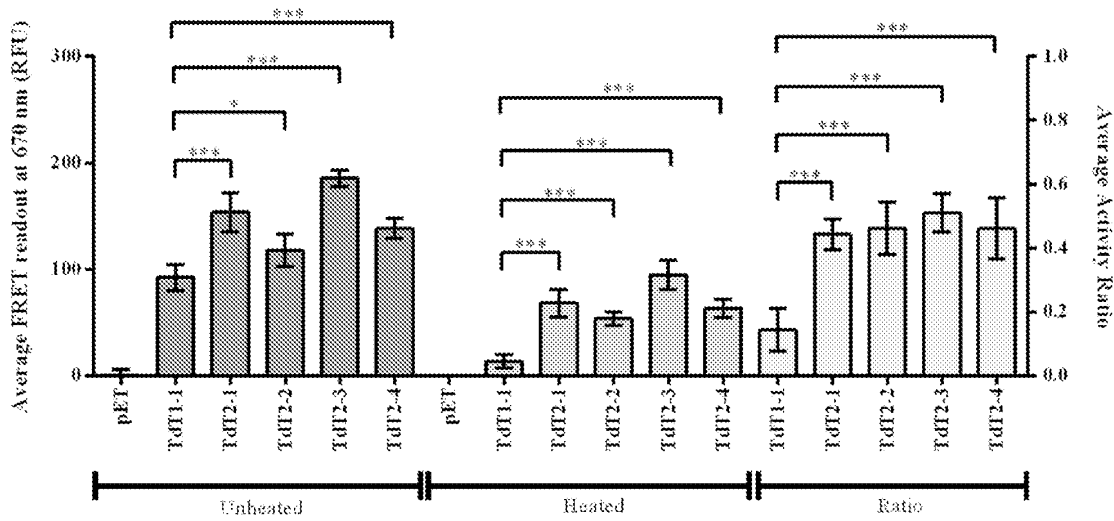


FIG. 7C

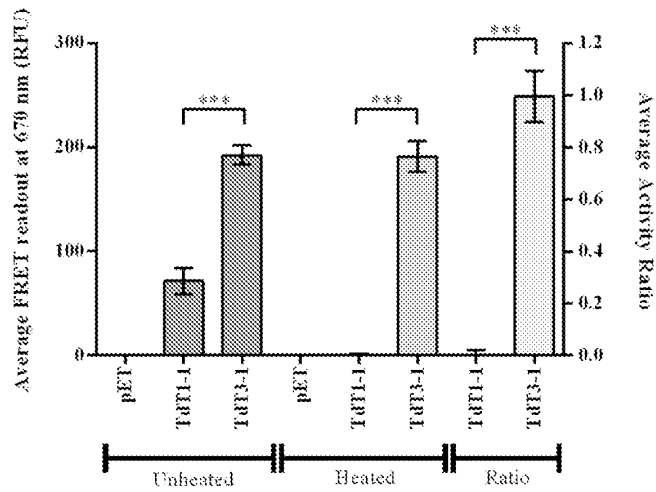
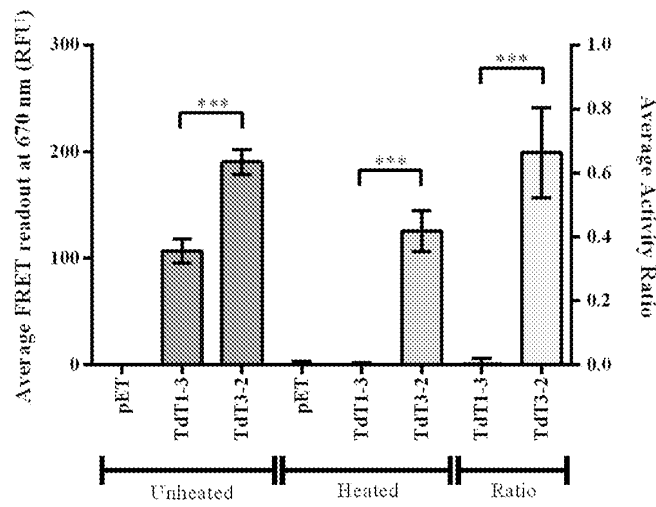


FIG. 7D



*: $0.01 < \text{p-value} \leq 0.05$
*: $0.001 < \text{p-value} \leq 0.01$
***: $\text{p-value} \leq 0.001$

FIG. 8A

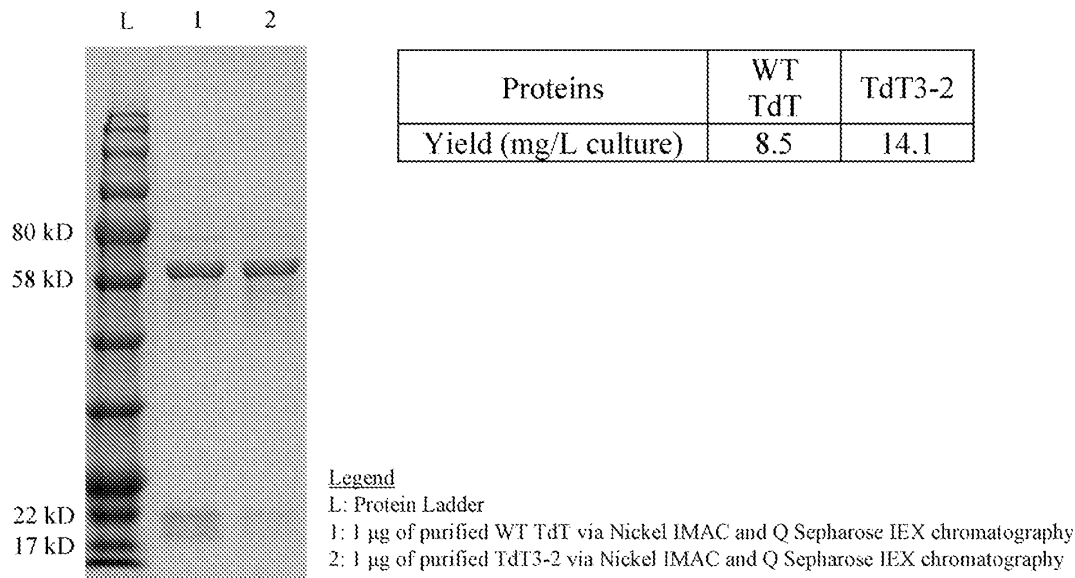
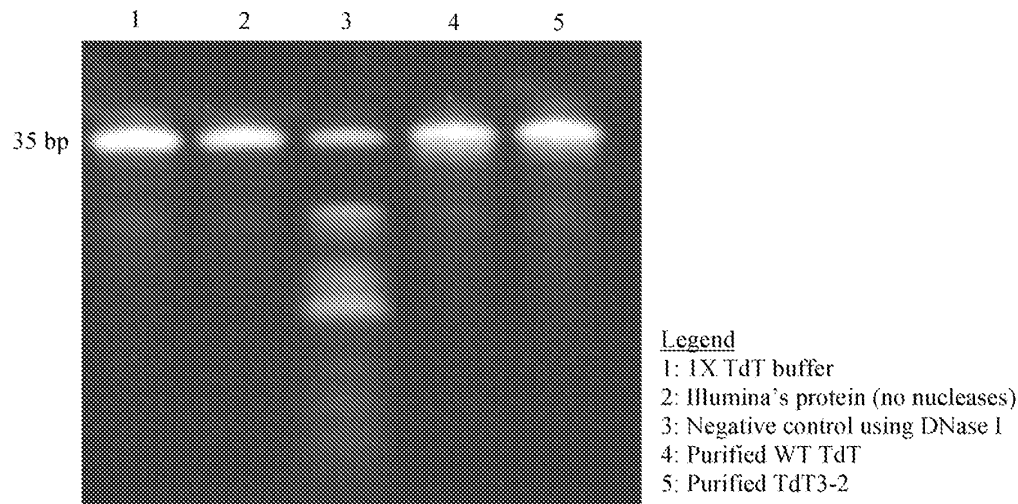


FIG. 8B



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FIG. 9A

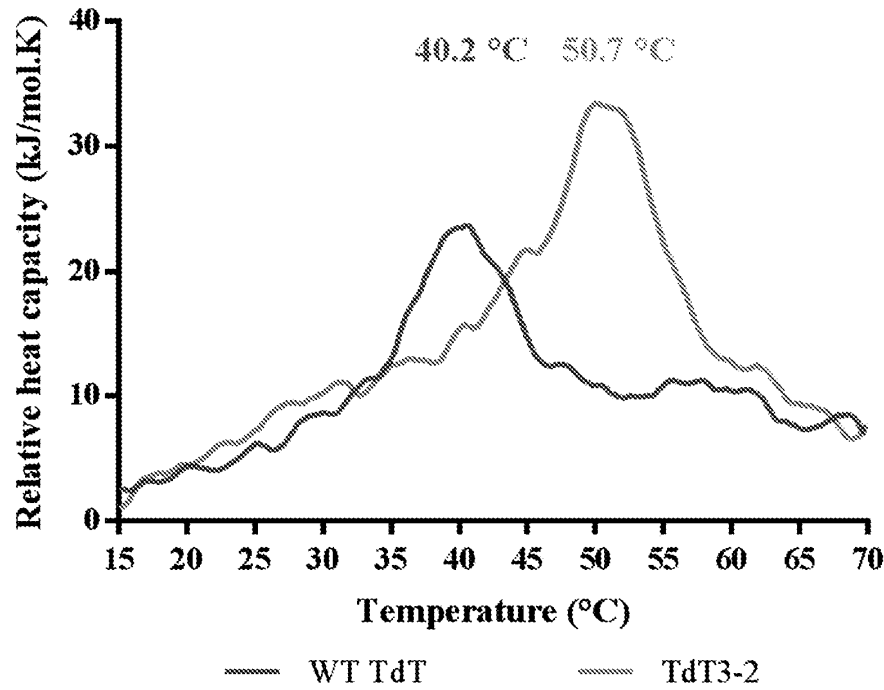
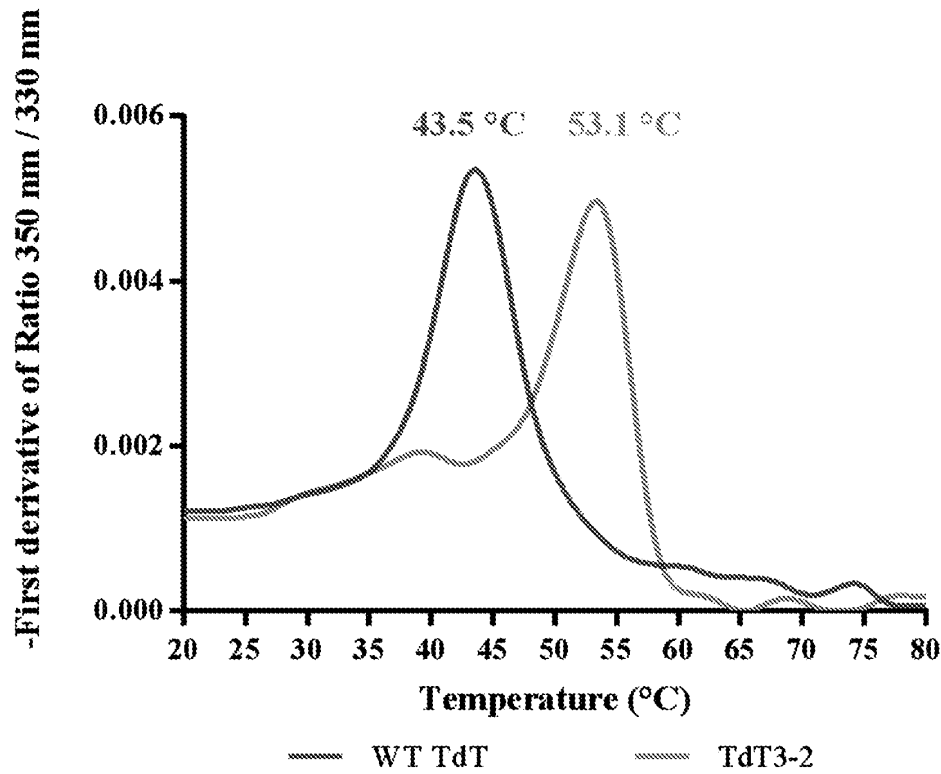


FIG. 9B



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FIG. 9C

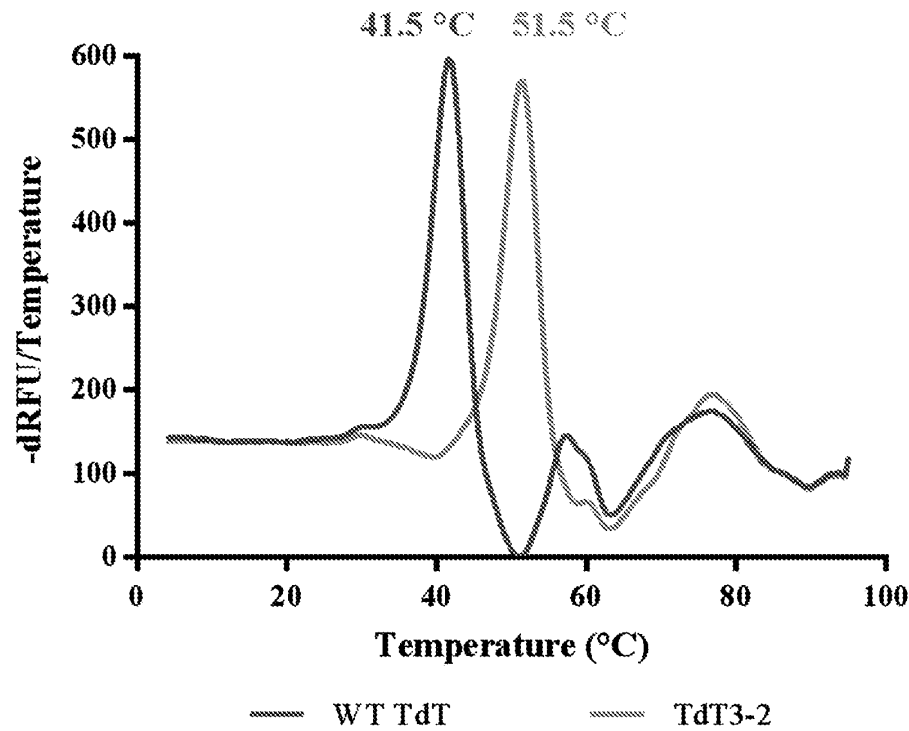


FIG. 9D

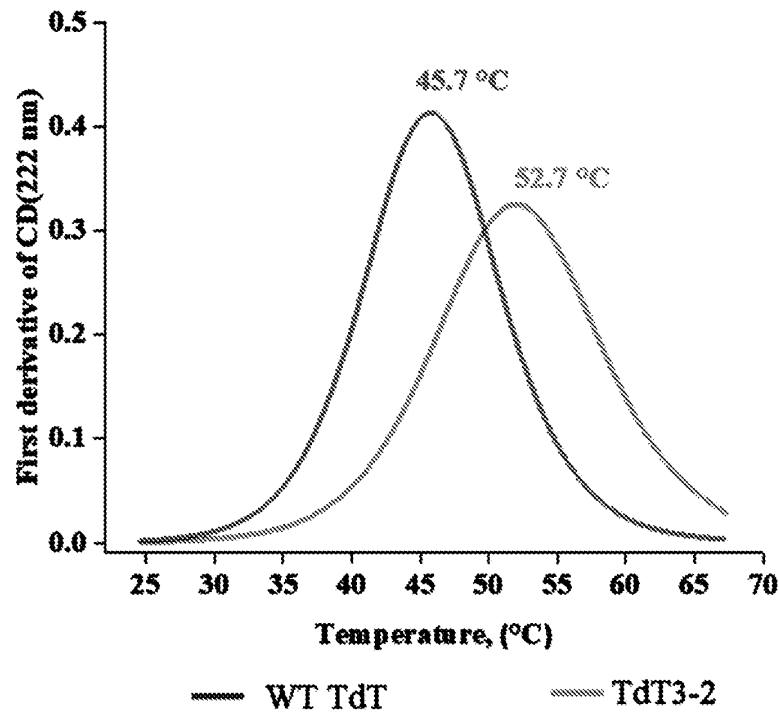


FIG. 10A

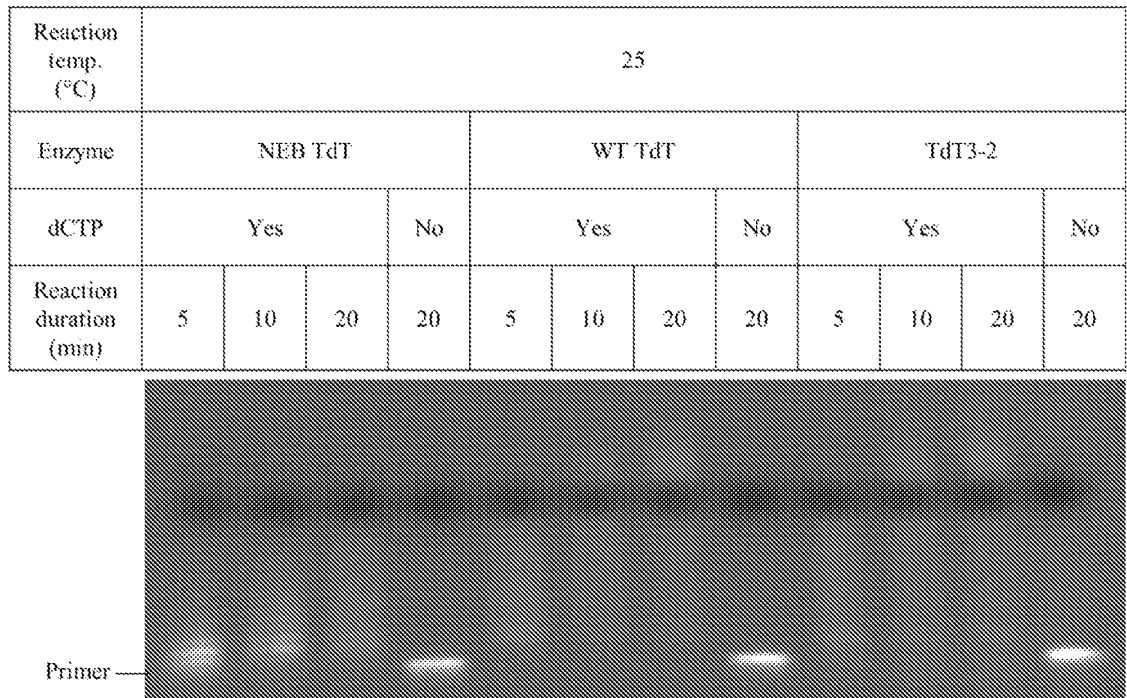


FIG. 10B

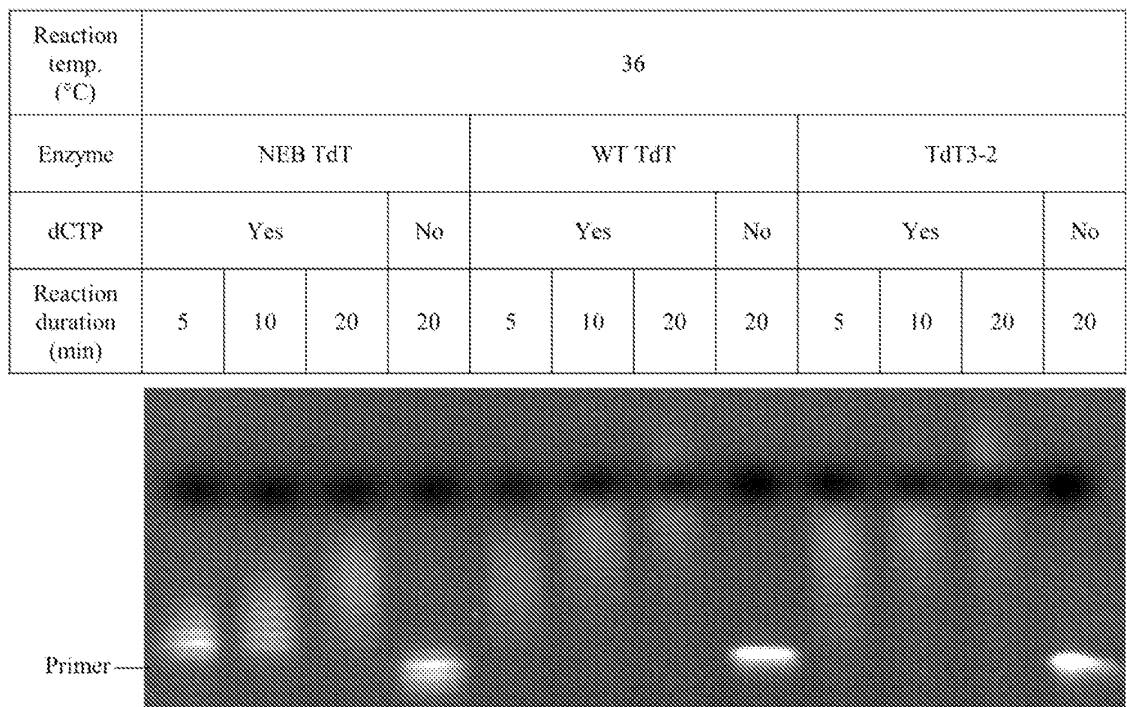


FIG. 10C

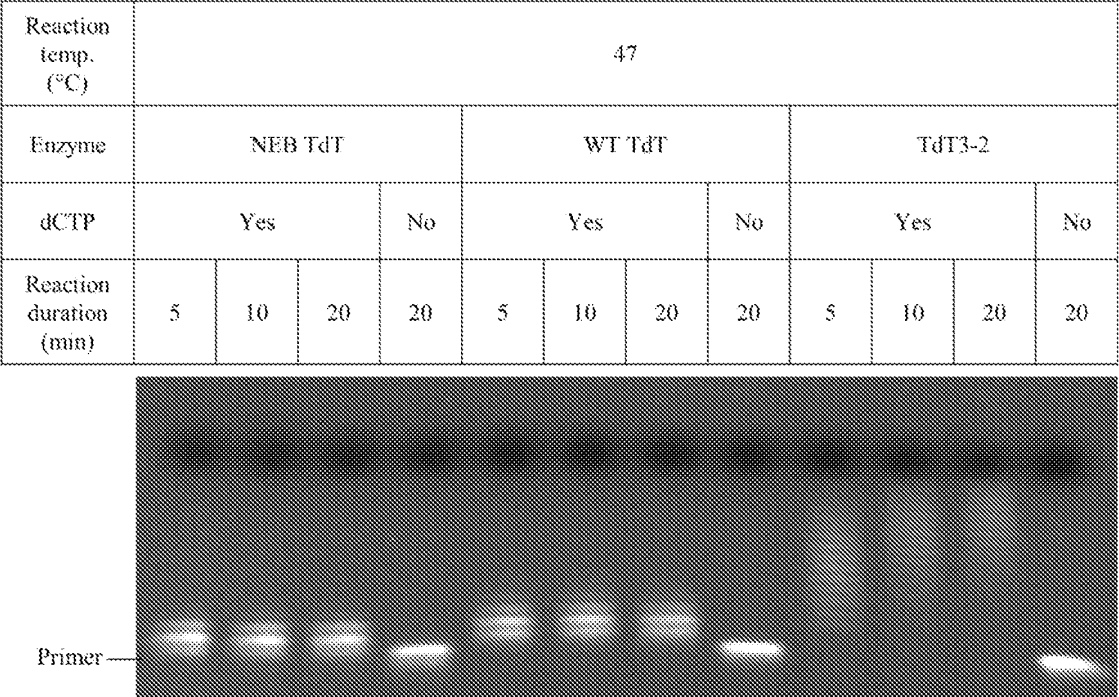
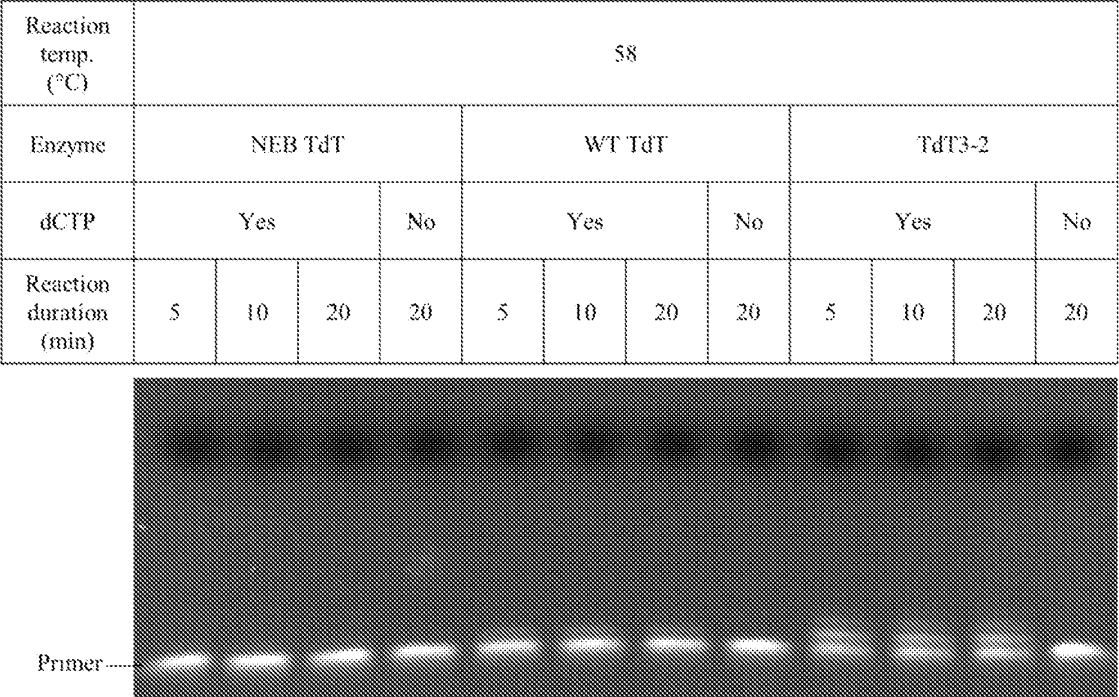


FIG. 10D



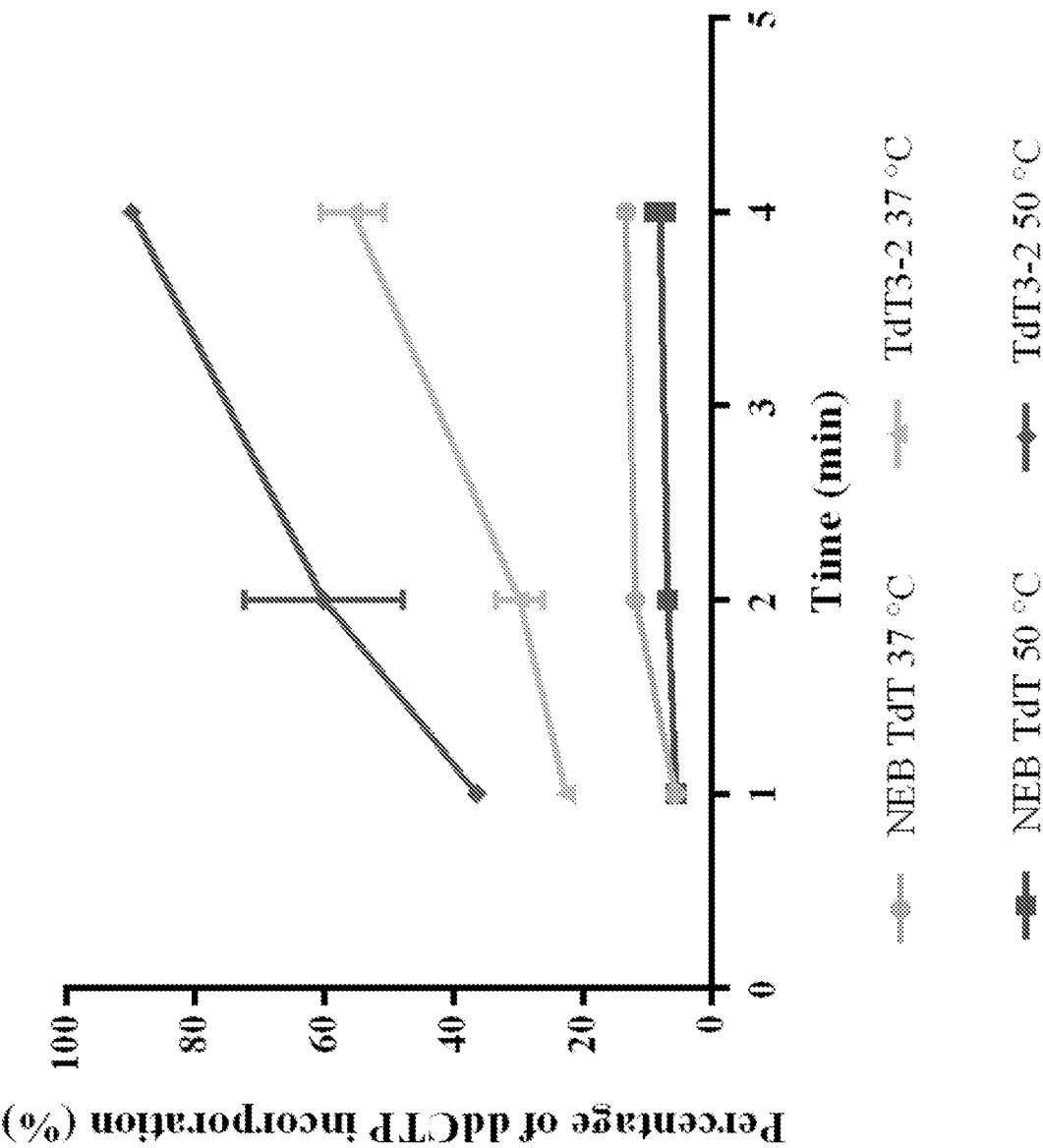


FIG. 11

Enzyme	-	NEB	NEB	NEB	NEB	NEB	NEB	NEB	TdTI3-2	TdTI3-2	TdTI3-2	TdTI3-2	TdTI3-2	TdTI3-2	TdTI3-2	TdTI3-2	TdTI3-2
Temp. (°C)	37	37	37	37	37	50	50	50	37	37	37	37	37	50	50	50	50
Duration (min)	4	1	2	4	1	2	2	4	0.5	1	2	4	0.5	1	2	4	4

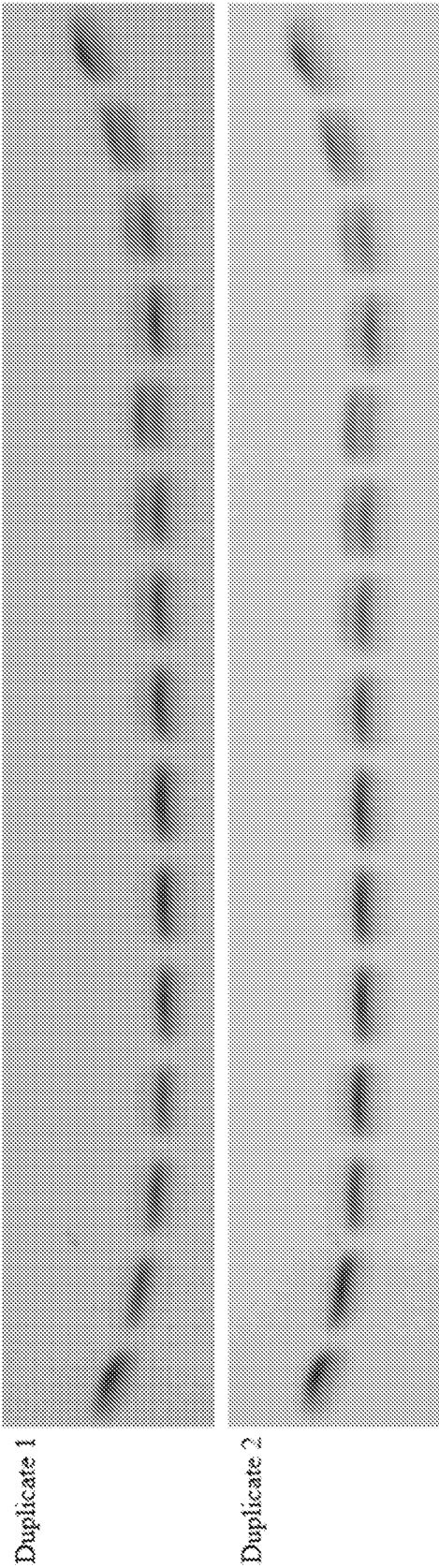
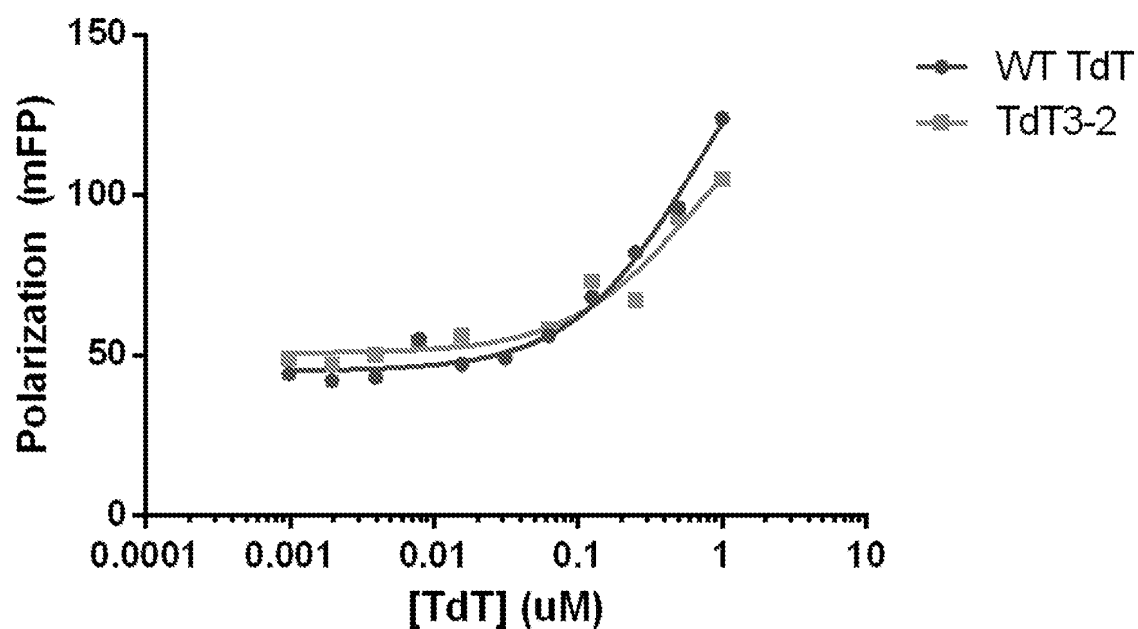


FIG. 12

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	WT TdT	TdT3-2
Best-fit values		
Bmax	128.4	89.42
Kd	0.6610	0.6358
offset	45.00	50.58
Std. Error		
Bmax	19.18	23.44
Kd	0.2050	0.3506
offset	1.746	2.337

FIG. 13



FIG. 14