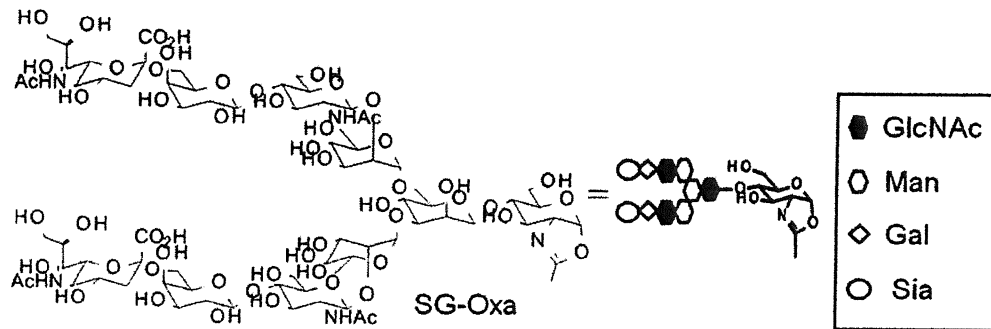
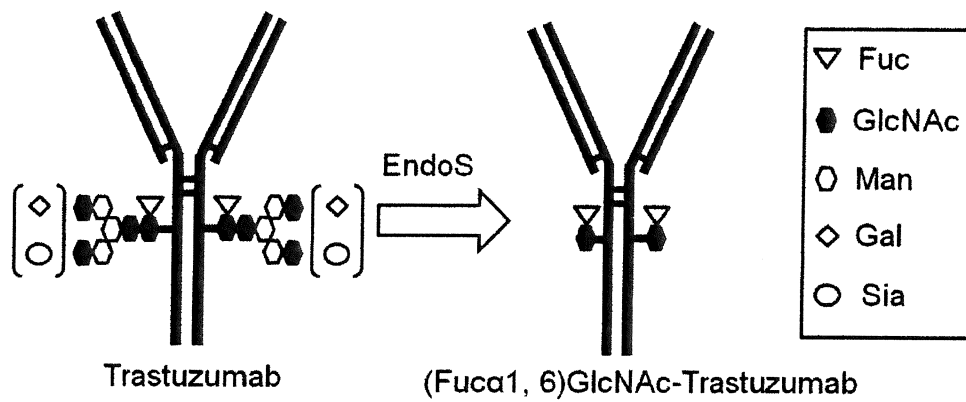


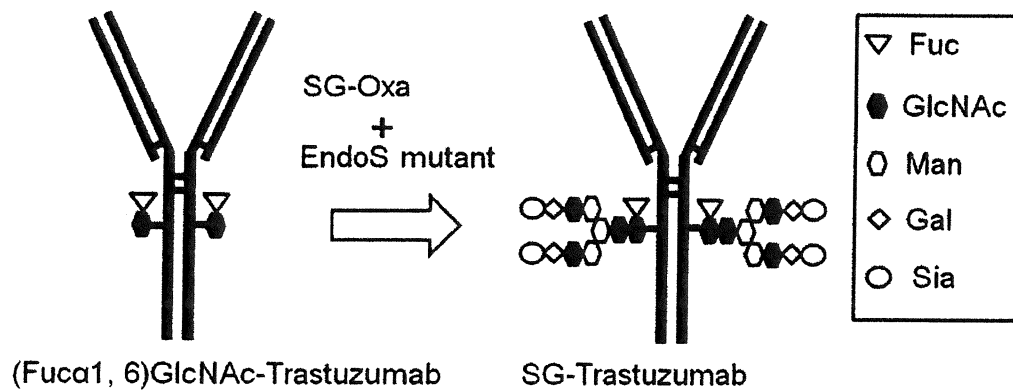
[Figure 1]



[Figure 2]



[Figure 3]



[Figure 4-1]

EndoS D233Q	37	40	50	60	70	71
EndoS D233Q/Q303L	E	E	I	S	E	A
EndoS D233Q/Q303L/E350Q	E	E	I	S	E	A
EndoS D233Q/Q303L/D405A	E	E	I	S	E	A
EndoS D233Q/E350Q	E	E	I	S	E	A
EndoS D233Q/D405A	E	E	I	S	E	A
EndoS D233Q/Y402F	E	E	I	S	E	A
EndoS D233Q	80	90	100			106
EndoS D233Q/Q303L	G	Q	A	Q	A	P
EndoS D233Q/Q303L/E350Q	G	Q	A	Q	A	P
EndoS D233Q/Q303L/D405A	G	Q	A	Q	A	P
EndoS D233Q/E350Q	G	Q	A	Q	A	P
EndoS D233Q/D405A	G	Q	A	Q	A	P
EndoS D233Q/Y402F	G	Q	A	Q	A	P
EndoS D233Q	110	120	130	140		141
EndoS D233Q/Q303L	K	P	T	S	E	P
EndoS D233Q/Q303L/E350Q	K	P	T	S	E	P
EndoS D233Q/Q303L/D405A	K	P	T	S	E	P
EndoS D233Q/E350Q	K	P	T	S	E	P
EndoS D233Q/D405A	K	P	T	S	E	P
EndoS D233Q/Y402F	K	P	T	S	E	P
EndoS D233Q	150	160	170			176
EndoS D233Q/Q303L	K	E	V	D	L	A
EndoS D233Q/Q303L/E350Q	K	E	V	D	L	A
EndoS D233Q/Q303L/D405A	K	E	V	D	L	A
EndoS D233Q/E350Q	K	E	V	D	L	A
EndoS D233Q/D405A	K	E	V	D	L	A
EndoS D233Q/Y402F	K	E	V	D	L	A

[Figure 4-2]

EndoS D233Q	180	TRVIRTTIPWRRFLAGGDDNSGGIAAEDTTSKYYPNTP	210	EGNK	211
EndoS D233Q/Q303L	190	TRVIRTTIPWRRFLAGGDDNSGGIAAEDTTSKYYPNTP	200	EGNK	211
EndoS D233Q/Q303L/E350Q		TRVIRTTIPWRRFLAGGDDNSGGIAAEDTTSKYYPNTP		EGNK	211
EndoS D233Q/Q303L/D405A		TRVIRTTIPWRRFLAGGDDNSGGIAAEDTTSKYYPNTP		EGNK	211
EndoS D233Q/E350Q		TRVIRTTIPWRRFLAGGDDNSGGIAAEDTTSKYYPNTP		EGNK	211
EndoS D233Q/D405A		TRVIRTTIPWRRFLAGGDDNSGGIAAEDTTSKYYPNTP		EGNK	211
EndoS D233Q/Y402F		TRVIRTTIPWRRFLAGGDDNSGGIAAEDTTSKYYPNTP		EGNK	211
EndoS D233Q	220	ALAKAIVDEYVYKYNLDDGLDVQVEHDSIPKVDKKE	230	KKE	246
EndoS D233Q/Q303L		ALAKAIVDEYVYKYNLDDGLDVQVEHDSIPKVDKKE		KKE	246
EndoS D233Q/Q303L/E350Q		ALAKAIVDEYVYKYNLDDGLDVQVEHDSIPKVDKKE		KKE	246
EndoS D233Q/Q303L/D405A		ALAKAIVDEYVYKYNLDDGLDVQVEHDSIPKVDKKE		KKE	246
EndoS D233Q/E350Q		ALAKAIVDEYVYKYNLDDGLDVQVEHDSIPKVDKKE		KKE	246
EndoS D233Q/D405A		ALAKAIVDEYVYKYNLDDGLDVQVEHDSIPKVDKKE		KKE	246
EndoS D233Q/Y402F		ALAKAIVDEYVYKYNLDDGLDVQVEHDSIPKVDKKE		KKE	246
EndoS D233Q	250	DTAGVERSIIQVFFEEIIGKLIIGPKGVDDKSR	260	IMDST	281
EndoS D233Q/Q303L		DTAGVERSIIQVFFEEIIGKLIIGPKGVDDKSR		IMDST	281
EndoS D233Q/Q303L/E350Q		DTAGVERSIIQVFFEEIIGKLIIGPKGVDDKSR		IMDST	281
EndoS D233Q/Q303L/D405A		DTAGVERSIIQVFFEEIIGKLIIGPKGVDDKSR		IMDST	281
EndoS D233Q/E350Q		DTAGVERSIIQVFFEEIIGKLIIGPKGVDDKSR		IMDST	281
EndoS D233Q/D405A		DTAGVERSIIQVFFEEIIGKLIIGPKGVDDKSR		IMDST	281
EndoS D233Q/Y402F		DTAGVERSIIQVFFEEIIGKLIIGPKGVDDKSR		IMDST	281
EndoS D233Q	290	YMAADKKNPPLIERGAPYINLLLVQVYGSQGEKGGWEP	300	WEP	316
EndoS D233Q/Q303L		YMAADKKNPPLIERGAPYINLLLVQVYGSQGEKGGWEP		WEP	316
EndoS D233Q/Q303L/E350Q		YMAADKKNPPLIERGAPYINLLLVQVYGSQGEKGGWEP		WEP	316
EndoS D233Q/Q303L/D405A		YMAADKKNPPLIERGAPYINLLLVQVYGSQGEKGGWEP		WEP	316
EndoS D233Q/E350Q		YMAADKKNPPLIERGAPYINLLLVQVYGSQGEKGGWEP		WEP	316
EndoS D233Q/D405A		YMAADKKNPPLIERGAPYINLLLVQVYGSQGEKGGWEP		WEP	316
EndoS D233Q/Y402F		YMAADKKNPPLIERGAPYINLLLVQVYGSQGEKGGWEP		WEP	316

[Figure 4-3]

EndoS D233Q	320	V S N R P P E K T M E E R W Q G Y S K Y I R P E Q Y M I G F S F Y E E N	351
EndoS D233Q/Q303L	330	V S N R P P E K T M E E R W Q G Y S K Y I R P E Q Y M I G F S F Y E E N	351
EndoS D233Q/Q303L/E350Q	340	V S N R P P E K T M E E R W Q G Y S K Y I R P E Q Y M I G F S F Y E E N	351
EndoS D233Q/Q303L/D405A	350	V S N R P P E K T M E E R W Q G Y S K Y I R P E Q Y M I G F S F Y E E N	351
EndoS D233Q/E350Q	360	V S N R P P E K T M E E R W Q G Y S K Y I R P E Q Y M I G F S F Y E E N	351
EndoS D233Q/D405A	370	V S N R P P E K T M E E R W Q G Y S K Y I R P E Q Y M I G F S F Y E E N	351
EndoS D233Q/Y402F	380	V S N R P P E K T M E E R W Q G Y S K Y I R P E Q Y M I G F S F Y E E N	351
EndoS D233Q	390	A Q E G N L W Y D I N S R K D E D K A N G I N T D I T G T R A E R Y A	386
EndoS D233Q/Q303L	400	A Q E G N L W Y D I N S R K D E D K A N G I N T D I T G T R A E R Y A	386
EndoS D233Q/Q303L/E350Q	410	A Q E G N L W Y D I N S R K D E D K A N G I N T D I T G T R A E R Y A	386
EndoS D233Q/Q303L/D405A	420	A Q E G N L W Y D I N S R K D E D K A N G I N T D I T G T R A E R Y A	386
EndoS D233Q/E350Q	430	A Q E G N L W Y D I N S R K D E D K A N G I N T D I T G T R A E R Y A	386
EndoS D233Q/D405A	440	A Q E G N L W Y D I N S R K D E D K A N G I N T D I T G T R A E R Y A	386
EndoS D233Q/Y402F	450	A Q E G N L W Y D I N S R K D E D K A N G I N T D I T G T R A E R Y A	386
EndoS D233Q	460	R W Q P K T G G V K G G I F S Y A I D R D G V A H Q P K K Y A K Q K E	421
EndoS D233Q/Q303L	470	R W Q P K T G G V K G G I F S Y A I D R D G V A H Q P K K Y A K Q K E	421
EndoS D233Q/Q303L/E350Q	480	R W Q P K T G G V K G G I F S Y A I D R D G V A H Q P K K Y A K Q K E	421
EndoS D233Q/Q303L/D405A	490	R W Q P K T G G V K G G I F S Y A I D R D G V A H Q P K K Y A K Q K E	421
EndoS D233Q/E350Q	500	R W Q P K T G G V K G G I F S Y A I D R D G V A H Q P K K Y A K Q K E	421
EndoS D233Q/D405A	510	R W Q P K T G G V K G G I F S Y A I D R D G V A H Q P K K Y A K Q K E	421
EndoS D233Q/Y402F	520	R W Q P K T G G V K G G I F S Y A I D R D G V A H Q P K K Y A K Q K E	421
EndoS D233Q	530	F K D A T D N I F H S D Y S V S K A L K T V M L K D K S Y D L I D E K	456
EndoS D233Q/Q303L	540	F K D A T D N I F H S D Y S V S K A L K T V M L K D K S Y D L I D E K	456
EndoS D233Q/Q303L/E350Q	550	F K D A T D N I F H S D Y S V S K A L K T V M L K D K S Y D L I D E K	456
EndoS D233Q/Q303L/D405A	560	F K D A T D N I F H S D Y S V S K A L K T V M L K D K S Y D L I D E K	456
EndoS D233Q/E350Q	570	F K D A T D N I F H S D Y S V S K A L K T V M L K D K S Y D L I D E K	456
EndoS D233Q/D405A	580	F K D A T D N I F H S D Y S V S K A L K T V M L K D K S Y D L I D E K	456
EndoS D233Q/Y402F	590	F K D A T D N I F H S D Y S V S K A L K T V M L K D K S Y D L I D E K	456

[Figure 4-4]

EndoS D233Q	460	D F P D K A L R R E A V M A Q V G T R K G D L E R F N G T L R L D N P A	490	491
EndoS D233Q/Q303L		D F P D K A L R R E A V M A Q V G T R K G D L E R F N G T L R L D N P A		491
EndoS D233Q/Q303L/E350Q		D F P D K A L R R E A V M A Q V G T R K G D L E R F N G T L R L D N P A		491
EndoS D233Q/Q303L/D405A		D F P D K A L R R E A V M A Q V G T R K G D L E R F N G T L R L D N P A		491
EndoS D233Q/E350Q		D F P D K A L R R E A V M A Q V G T R K G D L E R F N G T L R L D N P A		491
EndoS D233Q/D405A		D F P D K A L R R E A V M A Q V G T R K G D L E R F N G T L R L D N P A		491
EndoS D233Q/Y402F		D F P D K A L R R E A V M A Q V G T R K G D L E R F N G T L R L D N P A		491
EndoS D233Q	500	I Q S L E G L N K F K K L A Q L D L I G L S R R I T K L D R S V L P A N	520	526
EndoS D233Q/Q303L		I Q S L E G L N K F K K L A Q L D L I G L S R R I T K L D R S V L P A N		526
EndoS D233Q/Q303L/E350Q		I Q S L E G L N K F K K L A Q L D L I G L S R R I T K L D R S V L P A N		526
EndoS D233Q/Q303L/D405A		I Q S L E G L N K F K K L A Q L D L I G L S R R I T K L D R S V L P A N		526
EndoS D233Q/E350Q		I Q S L E G L N K F K K L A Q L D L I G L S R R I T K L D R S V L P A N		526
EndoS D233Q/D405A		I Q S L E G L N K F K K L A Q L D L I G L S R R I T K L D R S V L P A N		526
EndoS D233Q/Y402F		I Q S L E G L N K F K K L A Q L D L I G L S R R I T K L D R S V L P A N		526
EndoS D233Q	530	M K P G K D T L E T V L E T Y K K K D N K K E E P A T I P P V S L K V S G	550	561
EndoS D233Q/Q303L		M K P G K D T L E T V L E T Y K K K D N K K E E P A T I P P V S L K V S G		561
EndoS D233Q/Q303L/E350Q		M K P G K D T L E T V L E T Y K K K D N K K E E P A T I P P V S L K V S G		561
EndoS D233Q/Q303L/D405A		M K P G K D T L E T V L E T Y K K K D N K K E E P A T I P P V S L K V S G		561
EndoS D233Q/E350Q		M K P G K D T L E T V L E T Y K K K D N K K E E P A T I P P V S L K V S G		561
EndoS D233Q/D405A		M K P G K D T L E T V L E T Y K K K D N K K E E P A T I P P V S L K V S G		561
EndoS D233Q/Y402F		M K P G K D T L E T V L E T Y K K K D N K K E E P A T I P P V S L K V S G		561
EndoS D233Q	570	L T G L K E L D L S G F F D R E T L A G L D A A T L T S L E K V D I S G	590	596
EndoS D233Q/Q303L		L T G L K E L D L S G F F D R E T L A G L D A A T L T S L E K V D I S G		596
EndoS D233Q/Q303L/E350Q		L T G L K E L D L S G F F D R E T L A G L D A A T L T S L E K V D I S G		596
EndoS D233Q/Q303L/D405A		L T G L K E L D L S G F F D R E T L A G L D A A T L T S L E K V D I S G		596
EndoS D233Q/E350Q		L T G L K E L D L S G F F D R E T L A G L D A A T L T S L E K V D I S G		596
EndoS D233Q/D405A		L T G L K E L D L S G F F D R E T L A G L D A A T L T S L E K V D I S G		596
EndoS D233Q/Y402F		L T G L K E L D L S G F F D R E T L A G L D A A T L T S L E K V D I S G		596

[Figure 4-5]

EndoS D233Q	600	NKLDLAPG	TENRQ	IFFD	TM	LS	TS	IS	NH	VG	SNE	Q	TV	KF	631														
EndoS D233Q/Q303L		NKLDLAPG	TENRQ	IFFD	TM	LS	TS	IS	NH	VG	SNE	Q	TV	KF	631														
EndoS D233Q/Q303L/E350Q		NKLDLAPG	TENRQ	IFFD	TM	LS	TS	IS	NH	VG	SNE	Q	TV	KF	631														
EndoS D233Q/Q303L/D405A		NKLDLAPG	TENRQ	IFFD	TM	LS	TS	IS	NH	VG	SNE	Q	TV	KF	631														
EndoS D233Q/E350Q		NKLDLAPG	TENRQ	IFFD	TM	LS	TS	IS	NH	VG	SNE	Q	TV	KF	631														
EndoS D233Q/D405A		NKLDLAPG	TENRQ	IFFD	TM	LS	TS	IS	NH	VG	SNE	Q	TV	KF	631														
EndoS D233Q/Y402F		NKLDLAPG	TENRQ	IFFD	TM	LS	TS	IS	NH	VG	SNE	Q	TV	KF	631														
EndoS D233Q	640	DKQKPT	IGHYPP	D	Y	G	K	I	S	LR	LP	VA	NE	K	V	DL	Q	S	QL	LF	666								
EndoS D233Q/Q303L		DKQKPT	IGHYPP	D	T	Y	G	K	I	S	LR	LP	VA	NE	K	V	DL	Q	S	QL	LF	666							
EndoS D233Q/Q303L/E350Q		DKQKPT	IGHYPP	D	T	Y	G	K	I	S	LR	LP	VA	NE	K	V	DL	Q	S	QL	LF	666							
EndoS D233Q/Q303L/D405A		DKQKPT	IGHYPP	D	T	Y	G	K	I	S	LR	LP	VA	NE	K	V	DL	Q	S	QL	LF	666							
EndoS D233Q/E350Q		DKQKPT	IGHYPP	D	T	Y	G	K	I	S	LR	LP	VA	NE	K	V	DL	Q	S	QL	LF	666							
EndoS D233Q/D405A		DKQKPT	IGHYPP	D	T	Y	G	K	I	S	LR	LP	VA	NE	K	V	DL	Q	S	QL	LF	666							
EndoS D233Q/Y402F		DKQKPT	IGHYPP	D	T	Y	G	K	I	S	LR	LP	VA	NE	K	V	DL	Q	S	QL	LF	666							
EndoS D233Q	670	GTVTNQ	GGTLL	IN	SE	AD	Y	K	A	Y	Q	NH	K	I	A	G	R	S	F	V	D	S	N	Y	H	701			
EndoS D233Q/Q303L		GTVTNQ	GGTLL	IN	SE	AD	Y	K	A	Y	Q	NH	K	I	A	G	R	S	F	V	D	S	N	Y	H	701			
EndoS D233Q/Q303L/E350Q		GTVTNQ	GGTLL	IN	SE	AD	Y	K	A	Y	Q	NH	K	I	A	G	R	S	F	V	D	S	N	Y	H	701			
EndoS D233Q/Q303L/D405A		GTVTNQ	GGTLL	IN	SE	AD	Y	K	A	Y	Q	NH	K	I	A	G	R	S	F	V	D	S	N	Y	H	701			
EndoS D233Q/E350Q		GTVTNQ	GGTLL	IN	SE	AD	Y	K	A	Y	Q	NH	K	I	A	G	R	S	F	V	D	S	N	Y	H	701			
EndoS D233Q/D405A		GTVTNQ	GGTLL	IN	SE	AD	Y	K	A	Y	Q	NH	K	I	A	G	R	S	F	V	D	S	N	Y	H	701			
EndoS D233Q/Y402F		GTVTNQ	GGTLL	IN	SE	AD	Y	K	A	Y	Q	NH	K	I	A	G	R	S	F	V	D	S	N	Y	H	701			
EndoS D233Q	710	YNNFKV	SVSYEN	Y	T	V	K	V	T	D	S	T	L	G	T	T	D	K	T	T	L	A	T	D	K	E	E	T	736
EndoS D233Q/Q303L		YNNFKV	SVSYEN	Y	T	V	K	V	T	D	S	T	L	G	T	T	D	K	T	T	L	A	T	D	K	E	E	T	736
EndoS D233Q/Q303L/E350Q		YNNFKV	SVSYEN	Y	T	V	K	V	T	D	S	T	L	G	T	T	D	K	T	T	L	A	T	D	K	E	E	T	736
EndoS D233Q/Q303L/D405A		YNNFKV	SVSYEN	Y	T	V	K	V	T	D	S	T	L	G	T	T	D	K	T	T	L	A	T	D	K	E	E	T	736
EndoS D233Q/E350Q		YNNFKV	SVSYEN	Y	T	V	K	V	T	D	S	T	L	G	T	T	D	K	T	T	L	A	T	D	K	E	E	T	736
EndoS D233Q/D405A		YNNFKV	SVSYEN	Y	T	V	K	V	T	D	S	T	L	G	T	T	D	K	T	T	L	A	T	D	K	E	E	T	736
EndoS D233Q/Y402F		YNNFKV	SVSYEN	Y	T	V	K	V	T	D	S	T	L	G	T	T	D	K	T	T	L	A	T	D	K	E	E	T	736

[Figure 4-6]

EndoS D233Q	YKVDFF	SPADK	TKAVH	TAKVI	VGDEK	TMMVN	LAEG	770
EndoS D233Q/Q303L	YKVDFF	SPADK	TKAVH	TAKVI	VGDEK	TMMVN	LAEG	771
EndoS D233Q/Q303L/E350Q	YKVDFF	SPADK	TKAVH	TAKVI	VGDEK	TMMVN	LAEG	771
EndoS D233Q/Q303L/D405A	YKVDFF	SPADK	TKAVH	TAKVI	VGDEK	TMMVN	LAEG	771
EndoS D233Q/E350Q	YKVDFF	SPADK	TKAVH	TAKVI	VGDEK	TMMVN	LAEG	771
EndoS D233Q/D405A	YKVDFF	SPADK	TKAVH	TAKVI	VGDEK	TMMVN	LAEG	771
EndoS D233Q/Y402F	YKVDFF	SPADK	TKAVH	TAKVI	VGDEK	TMMVN	LAEG	771
EndoS D233Q	ATVIGG	SADPP	VNARKK	VFDGQ	QLGSE	TDNIS	LGWDSK	806
EndoS D233Q/Q303L	ATVIGG	SADPP	VNARKK	VFDGQ	QLGSE	TDNIS	LGWDSK	806
EndoS D233Q/Q303L/E350Q	ATVIGG	SADPP	VNARKK	VFDGQ	QLGSE	TDNIS	LGWDSK	806
EndoS D233Q/Q303L/D405A	ATVIGG	SADPP	VNARKK	VFDGQ	QLGSE	TDNIS	LGWDSK	806
EndoS D233Q/E350Q	ATVIGG	SADPP	VNARKK	VFDGQ	QLGSE	TDNIS	LGWDSK	806
EndoS D233Q/D405A	ATVIGG	SADPP	VNARKK	VFDGQ	QLGSE	TDNIS	LGWDSK	806
EndoS D233Q/Y402F	ATVIGG	SADPP	VNARKK	VFDGQ	QLGSE	TDNIS	LGWDSK	806
EndoS D233Q	QSIIFK	LKEDGL	IKHHWR	FFFN	DSARN	PEET	TNKP IQE	841
EndoS D233Q/Q303L	QSIIFK	LKEDGL	IKHHWR	FFFN	DSARN	PEET	TNKP IQE	841
EndoS D233Q/Q303L/E350Q	QSIIFK	LKEDGL	IKHHWR	FFFN	DSARN	PEET	TNKP IQE	841
EndoS D233Q/Q303L/D405A	QSIIFK	LKEDGL	IKHHWR	FFFN	DSARN	PEET	TNKP IQE	841
EndoS D233Q/E350Q	QSIIFK	LKEDGL	IKHHWR	FFFN	DSARN	PEET	TNKP IQE	841
EndoS D233Q/D405A	QSIIFK	LKEDGL	IKHHWR	FFFN	DSARN	PEET	TNKP IQE	841
EndoS D233Q/Y402F	QSIIFK	LKEDGL	IKHHWR	FFFN	DSARN	PEET	TNKP IQE	841
EndoS D233Q	ASLQ	IFFN	IKDDYN	LDNL	LENPN	KFFDE	KYWI TVD	876
EndoS D233Q/Q303L	ASLQ	IFFN	IKDDYN	LDNL	LENPN	KFFDE	KYWI TVD	876
EndoS D233Q/Q303L/E350Q	ASLQ	IFFN	IKDDYN	LDNL	LENPN	KFFDE	KYWI TVD	876
EndoS D233Q/Q303L/D405A	ASLQ	IFFN	IKDDYN	LDNL	LENPN	KFFDE	KYWI TVD	876
EndoS D233Q/E350Q	ASLQ	IFFN	IKDDYN	LDNL	LENPN	KFFDE	KYWI TVD	876
EndoS D233Q/D405A	ASLQ	IFFN	IKDDYN	LDNL	LENPN	KFFDE	KYWI TVD	876
EndoS D233Q/Y402F	ASLQ	IFFN	IKDDYN	LDNL	LENPN	KFFDE	KYWI TVD	876

[Figure 4-7]

EndoS D233Q	SAQGERATAAFSSNTTLNNII	TSKYYWRVVFDTKGGDRYSS	910	911
EndoS D233Q/Q303L	SAQGERATAAFSSNTTLNNII	TSKYYWRVVFDTKGGDRYSS	911	911
EndoS D233Q/Q303L/E350Q	SAQGERATAAFSSNTTLNNII	TSKYYWRVVFDTKGGDRYSS	911	911
EndoS D233Q/Q303L/D405A	SAQGERATAAFSSNTTLNNII	TSKYYWRVVFDTKGGDRYSS	911	911
EndoS D233Q/E350Q	SAQGERATAAFSSNTTLNNII	TSKYYWRVVFDTKGGDRYSS	911	911
EndoS D233Q/D405A	SAQGERATAAFSSNTTLNNII	TSKYYWRVVFDTKGGDRYSS	911	911
EndoS D233Q/Y402F	SAQGERATAAFSSNTTLNNII	TSKYYWRVVFDTKGGDRYSS	911	911
EndoS D233Q	PVVPPELQILGYPPLPNADT	IMKTTVTTAKKELSSQKDKK	940	946
EndoS D233Q/Q303L	PVVPPELQILGYPPLPNADT	IMKTTVTTAKKELSSQKDKK	946	946
EndoS D233Q/Q303L/E350Q	PVVPPELQILGYPPLPNADT	IMKTTVTTAKKELSSQKDKK	946	946
EndoS D233Q/Q303L/D405A	PVVPPELQILGYPPLPNADT	IMKTTVTTAKKELSSQKDKK	946	946
EndoS D233Q/E350Q	PVVPPELQILGYPPLPNADT	IMKTTVTTAKKELSSQKDKK	946	946
EndoS D233Q/D405A	PVVPPELQILGYPPLPNADT	IMKTTVTTAKKELSSQKDKK	946	946
EndoS D233Q/Y402F	PVVPPELQILGYPPLPNADT	IMKTTVTTAKKELSSQKDKK	946	946
EndoS D233Q	FSQKMLDELELKKIKKEMALE	TSLNSSKIFFDVTAINNANAG	980	981
EndoS D233Q/Q303L	FSQKMLDELELKKIKKEMALE	TSLNSSKIFFDVTAINNANAG	981	981
EndoS D233Q/Q303L/E350Q	FSQKMLDELELKKIKKEMALE	TSLNSSKIFFDVTAINNANAG	981	981
EndoS D233Q/Q303L/D405A	FSQKMLDELELKKIKKEMALE	TSLNSSKIFFDVTAINNANAG	981	981
EndoS D233Q/E350Q	FSQKMLDELELKKIKKEMALE	TSLNSSKIFFDVTAINNANAG	981	981
EndoS D233Q/D405A	FSQKMLDELELKKIKKEMALE	TSLNSSKIFFDVTAINNANAG	981	981
EndoS D233Q/Y402F	FSQKMLDELELKKIKKEMALE	TSLNSSKIFFDVTAINNANAG	981	981
EndoS D233Q	VLKDCIEKRQLLKK	995	995	995
EndoS D233Q/Q303L	VLKDCIEKRQLLKK	995	995	995
EndoS D233Q/Q303L/E350Q	VLKDCIEKRQLLKK	995	995	995
EndoS D233Q/Q303L/D405A	VLKDCIEKRQLLKK	995	995	995
EndoS D233Q/E350Q	VLKDCIEKRQLLKK	995	995	995
EndoS D233Q/D405A	VLKDCIEKRQLLKK	995	995	995
EndoS D233Q/Y402F	VLKDCIEKRQLLKK	995	995	995