

STAN_1302WO_sequence_listing_ST25
SEQUENCE LISTING

<110> Woods, Elliot C
Xiao, Han
Bertozzi, Carolyn R
Gray, Melissa

<120> CONJUGATES FOR TARGETED CELL SURFACE EDITING

<130> STAN-1302WO

<150> 62357645

<151> 2016-07-01

<160> 4

<170> PatentIn version 3.5

<210> 1

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic sequence

<400> 1

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Val Asn Thr Ala
20 25 30

Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ser Ala Ser Phe Leu Tyr Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Arg Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

STAN_1302W0_sequence_listing_ST25

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln His Tyr Thr Thr Pro Pro
85 90 95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
180 185 190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
195 200 205

Phe Asn Arg Gly Glu Cys
210

<210> 2
<211> 451
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic sequence

<400> 2

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

STAN_1302W0_sequence_listing_ST25

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asn Ile Lys Asp Thr
20 25 30

Tyr Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Arg Ile Tyr Pro Thr Asn Gly Tyr Thr Arg Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Ala Asp Thr Ser Lys Asn Thr Ala Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ser Arg Trp Gly Gly Asp Gly Phe Tyr Ala Met Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
115 120 125

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
130 135 140

Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
145 150 155 160

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
165 170 175

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
180 185 190

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
195 200 205

STAN_1302W0_sequence_listing_ST25

Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val	Glu	Pro	Pro	Lys	Ser	Cys	210	215	220	
Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu	Gly	225	230	235	240
Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	245	250	255	
Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	260	265	270	
Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	275	280	285	
His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	290	295	300	
Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	305	310	315	320
Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	325	330	335	
Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	340	345	350	
Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	Lys	Asn	Gln	Val	Ser	355	360	365	
Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	370	375	380	
Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	385	390	395	400

STAN_1302W0_sequence_listing_ST25

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
 405 410 415

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
 420 425 430

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
 435 440 445

Pro Gly Lys
 450

<210> 3
 <211> 381
 <212> PRT
 <213> Salmonella typhimurium sialidase

<400> 3

Thr Val Glu Lys Ser Val Val Phe Lys Ala Glu Gly Glu His Phe Thr
 1 5 10 15

Asp Gln Lys Gly Asn Thr Ile Val Gly Ser Gly Ser Gly Gly Thr Thr
 20 25 30

Lys Tyr Phe Arg Ile Pro Ala Met Cys Thr Thr Ser Lys Gly Thr Ile
 35 40 45

Val Val Phe Ala Asp Ala Arg His Asn Thr Ala Ser Asp Gln Ser Phe
 50 55 60

Ile Asp Thr Ala Ala Ala Arg Ser Thr Asp Gly Gly Lys Thr Trp Asn
 65 70 75 80

Lys Lys Ile Ala Ile Tyr Asn Asp Arg Val Asn Ser Lys Leu Ser Arg
 85 90 95

STAN_1302W0_sequence_listing_ST25

Val Met Asp Pro Thr Cys Ile Val Ala Asn Ile Gln Gly Arg Glu Thr
100 105 110

Ile Leu Val Met Val Gly Lys Trp Asn Asn Asn Asp Lys Thr Trp Gly
115 120 125

Ala Tyr Arg Asp Lys Ala Pro Asp Thr Asp Trp Asp Leu Val Leu Tyr
130 135 140

Lys Ser Thr Asp Asp Gly Val Thr Phe Ser Lys Val Glu Thr Asn Ile
145 150 155 160

His Asp Ile Val Thr Lys Asn Gly Thr Ile Ser Ala Met Leu Gly Gly
165 170 175

Val Gly Ser Gly Leu Gln Leu Asn Asp Gly Lys Leu Val Phe Pro Val
180 185 190

Gln Met Val Arg Thr Lys Asn Ile Thr Thr Val Leu Asn Thr Ser Phe
195 200 205

Ile Tyr Ser Thr Asp Gly Ile Thr Trp Ser Leu Pro Ser Gly Tyr Cys
210 215 220

Glu Gly Phe Gly Ser Glu Asn Asn Ile Ile Glu Phe Asn Ala Ser Leu
225 230 235 240

Val Asn Asn Ile Arg Asn Ser Gly Leu Arg Arg Ser Phe Glu Thr Lys
245 250 255

Asp Phe Gly Lys Thr Trp Thr Glu Phe Pro Pro Met Asp Lys Lys Val
260 265 270

Asp Asn Arg Asn His Gly Val Gln Gly Ser Thr Ile Thr Ile Pro Ser
275 280 285

STAN_1302W0_sequence_listing_ST25

Gly Asn Lys Leu Val Ala Ala His Ser Ser Ala Gln Asn Lys Asn Asn
 290 295 300

Asp Tyr Thr Arg Ser Asp Ile Ser Leu Tyr Ala His Asn Leu Tyr Ser
 305 310 315 320

Gly Glu Val Lys Leu Ile Asp Asp Phe Tyr Pro Lys Val Gly Asn Ala
 325 330 335

Ser Gly Ala Gly Tyr Ser Cys Leu Ser Tyr Arg Lys Asn Val Asp Lys
 340 345 350

Glu Thr Leu Tyr Val Val Tyr Glu Ala Asn Gly Ser Ile Glu Phe Gln
 355 360 365

Asp Leu Ser Arg His Leu Pro Val Ile Lys Ser Tyr Asn
 370 375 380

<210> 4
 <211> 757
 <212> PRT
 <213> Vibrio cholerae sialidase

<400> 4

Ala Leu Phe Asp Tyr Asn Ala Thr Gly Asp Thr Glu Phe Asp Ser Pro
 1 5 10 15

Ala Lys Gln Gly Trp Met Gln Asp Asn Thr Asn Asn Gly Ser Gly Val
 20 25 30

Leu Thr Asn Ala Asp Gly Met Pro Ala Trp Leu Val Gln Gly Ile Gly
 35 40 45

Gly Arg Ala Gln Trp Thr Tyr Ser Leu Ser Thr Asn Gln His Ala Gln
 50 55 60

STAN_1302W0_sequence_listing_ST25

Ala Ser Ser Phe Gly Trp Arg Met Thr Thr Glu Met Lys Val Leu Ser
65 70 75 80

Gly Gly Met Ile Thr Asn Tyr Tyr Ala Asn Gly Thr Gln Arg Val Leu
85 90 95

Pro Ile Ile Ser Leu Asp Ser Ser Gly Asn Leu Val Val Glu Phe Glu
100 105 110

Gly Gln Thr Gly Arg Thr Val Leu Ala Thr Gly Thr Ala Ala Thr Glu
115 120 125

Tyr His Lys Phe Glu Leu Val Phe Leu Pro Gly Ser Asn Pro Ser Ala
130 135 140

Ser Phe Tyr Phe Asp Gly Lys Leu Ile Arg Asp Asn Ile Gln Pro Thr
145 150 155 160

Ala Ser Lys Gln Asn Met Ile Val Trp Gly Asn Gly Ser Ser Asn Thr
165 170 175

Asp Gly Val Ala Ala Tyr Arg Asp Ile Lys Phe Glu Ile Gln Gly Asp
180 185 190

Val Ile Phe Arg Gly Pro Asp Arg Ile Pro Ser Ile Val Ala Ser Ser
195 200 205

Val Thr Pro Gly Val Val Thr Ala Phe Ala Glu Lys Arg Val Gly Gly
210 215 220

Gly Asp Pro Gly Ala Leu Ser Asn Thr Asn Asp Ile Ile Thr Arg Thr
225 230 235 240

Ser Arg Asp Gly Gly Ile Thr Trp Asp Thr Glu Leu Asn Leu Thr Glu
245 250 255

STAN_1302W0_sequence_listing_ST25

Gln Ile Asn Val Ser Asp Glu Phe Asp Phe Ser Asp Pro Arg Pro Ile
 260 265 270

Tyr Asp Pro Ser Ser Asn Thr Val Leu Val Ser Tyr Ala Arg Trp Pro
 275 280 285

Thr Asp Ala Ala Gln Asn Gly Asp Arg Ile Lys Pro Trp Met Pro Asn
 290 295 300

Gly Ile Phe Tyr Ser Val Tyr Asp Val Ala Ser Gly Asn Trp Gln Ala
 305 310 315 320

Pro Ile Asp Val Thr Asp Gln Val Lys Glu Arg Ser Phe Gln Ile Ala
 325 330 335

Gly Trp Gly Gly Ser Glu Leu Tyr Arg Arg Asn Thr Ser Leu Asn Ser
 340 345 350

Gln Gln Asp Trp Gln Ser Asn Ala Lys Ile Arg Ile Val Asp Gly Ala
 355 360 365

Ala Asn Gln Ile Gln Val Ala Asp Gly Ser Arg Lys Tyr Val Val Thr
 370 375 380

Leu Ser Ile Asp Glu Ser Gly Gly Leu Val Ala Asn Leu Asn Gly Val
 385 390 395 400

Ser Ala Pro Ile Ile Leu Gln Ser Glu His Ala Lys Val His Ser Phe
 405 410 415

His Asp Tyr Glu Leu Gln Tyr Ser Ala Leu Asn His Thr Thr Thr Leu
 420 425 430

Phe Val Asp Gly Gln Gln Ile Thr Thr Trp Ala Gly Glu Val Ser Gln
 435 440 445

STAN_1302WO_sequence_listing_ST25

Glu Asn Asn Ile Gln Phe Gly Asn Ala Asp Ala Gln Ile Asp Gly Arg
 450 455 460

Leu His Val Gln Lys Ile Val Leu Thr Gln Gln Gly His Asn Leu Val
 465 470 475 480

Glu Phe Asp Ala Phe Tyr Leu Ala Gln Gln Thr Pro Glu Val Glu Lys
 485 490 495

Asp Leu Glu Lys Leu Gly Trp Thr Lys Ile Lys Thr Gly Asn Thr Met
 500 505 510

Ser Leu Tyr Gly Asn Ala Ser Val Asn Pro Gly Pro Gly His Gly Ile
 515 520 525

Thr Leu Thr Arg Gln Gln Asn Ile Ser Gly Ser Gln Asn Gly Arg Leu
 530 535 540

Ile Tyr Pro Ala Ile Val Leu Asp Arg Phe Phe Leu Asn Val Met Ser
 545 550 555 560

Ile Tyr Ser Asp Asp Gly Gly Ser Asn Trp Gln Thr Gly Ser Thr Leu
 565 570 575

Pro Ile Pro Phe Arg Trp Lys Ser Ser Ser Ile Leu Glu Thr Leu Glu
 580 585 590

Pro Ser Glu Ala Asp Met Val Glu Leu Gln Asn Gly Asp Leu Leu Leu
 595 600 605

Thr Ala Arg Leu Asp Phe Asn Gln Ile Val Asn Gly Val Asn Tyr Ser
 610 615 620

Pro Arg Gln Gln Phe Leu Ser Lys Asp Gly Gly Ile Thr Trp Ser Leu
 625 630 635 640

STAN_1302WO_sequence_listing_ST25

Leu Glu Ala Asn Asn Ala Asn Val Phe Ser Asn Ile Ser Thr Gly Thr
645 650 655

Val Asp Ala Ser Ile Thr Arg Phe Glu Gln Ser Asp Gly Ser His Phe
660 665 670

Leu Leu Phe Thr Asn Pro Gln Gly Asn Pro Ala Gly Thr Asn Gly Arg
675 680 685

Gln Asn Leu Gly Leu Trp Phe Ser Phe Asp Glu Gly Val Thr Trp Lys
690 695 700

Gly Pro Ile Gln Leu Val Asn Gly Ala Ser Ala Tyr Ser Asp Ile Tyr
705 710 715 720

Gln Leu Asp Ser Glu Asn Ala Ile Val Ile Val Glu Thr Asp Asn Ser
725 730 735

Asn Met Arg Ile Leu Arg Met Pro Ile Thr Leu Leu Lys Gln Lys Leu
740 745 750

Thr Leu Ser Gln Asn
755