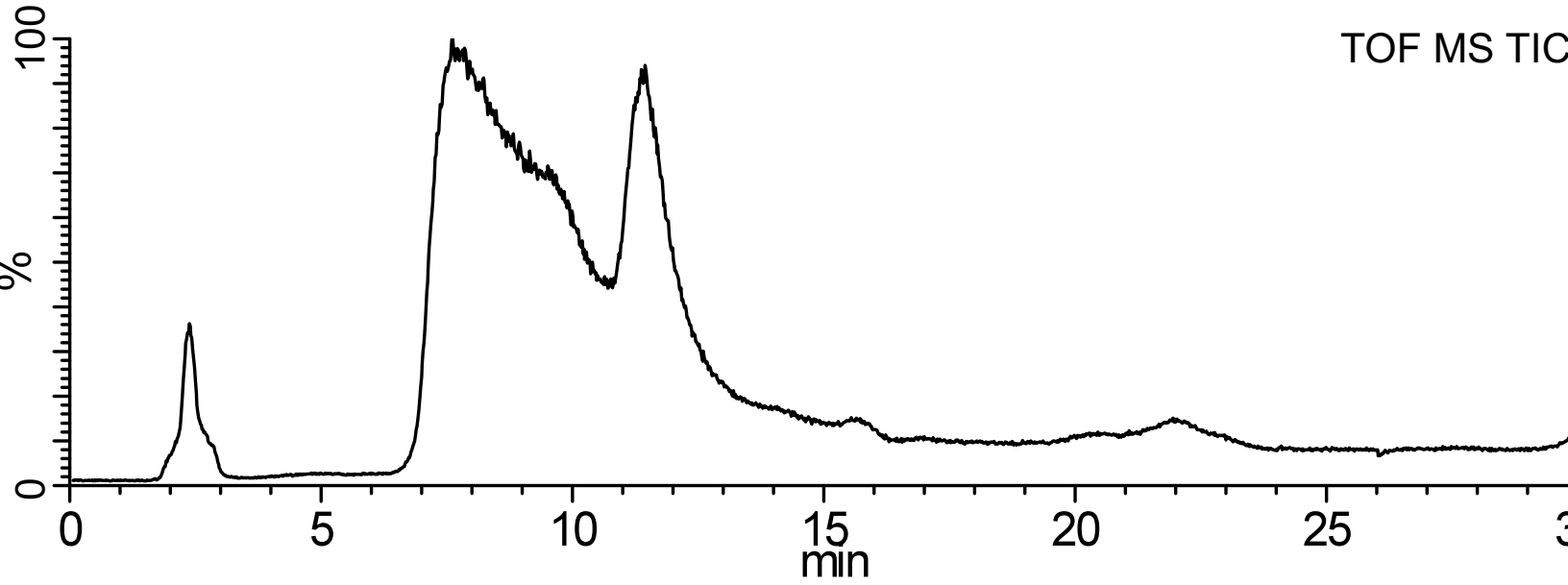
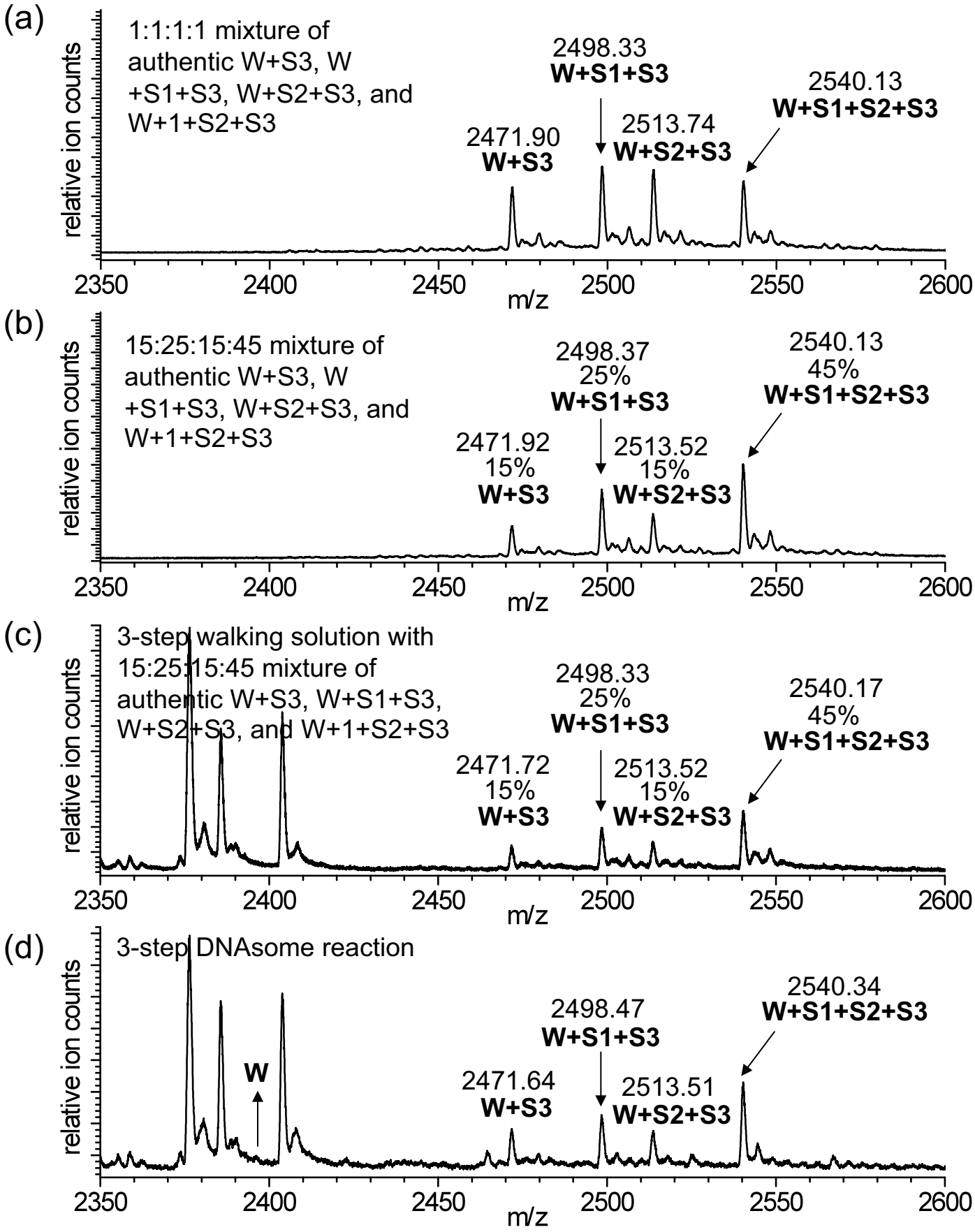
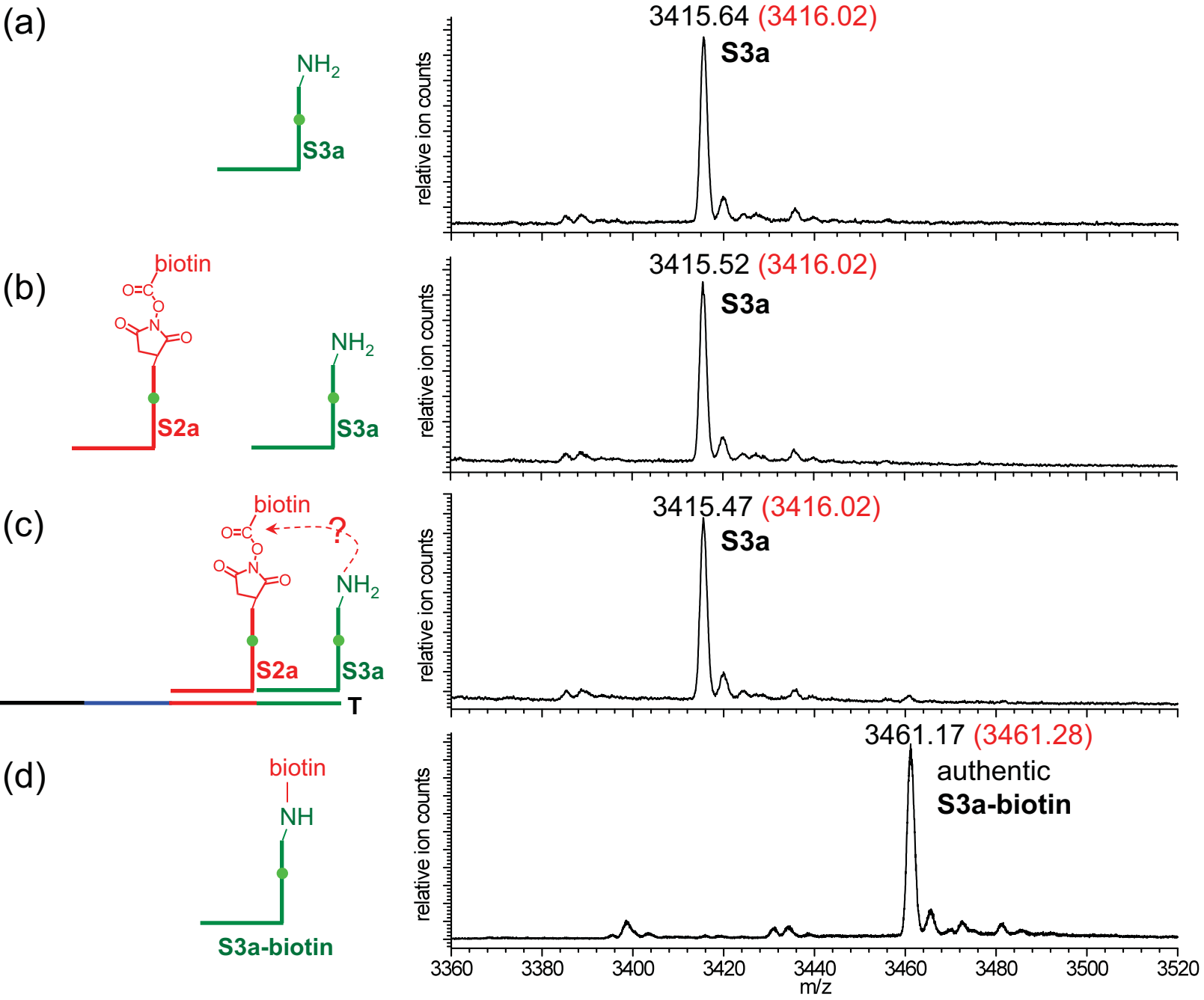
S1

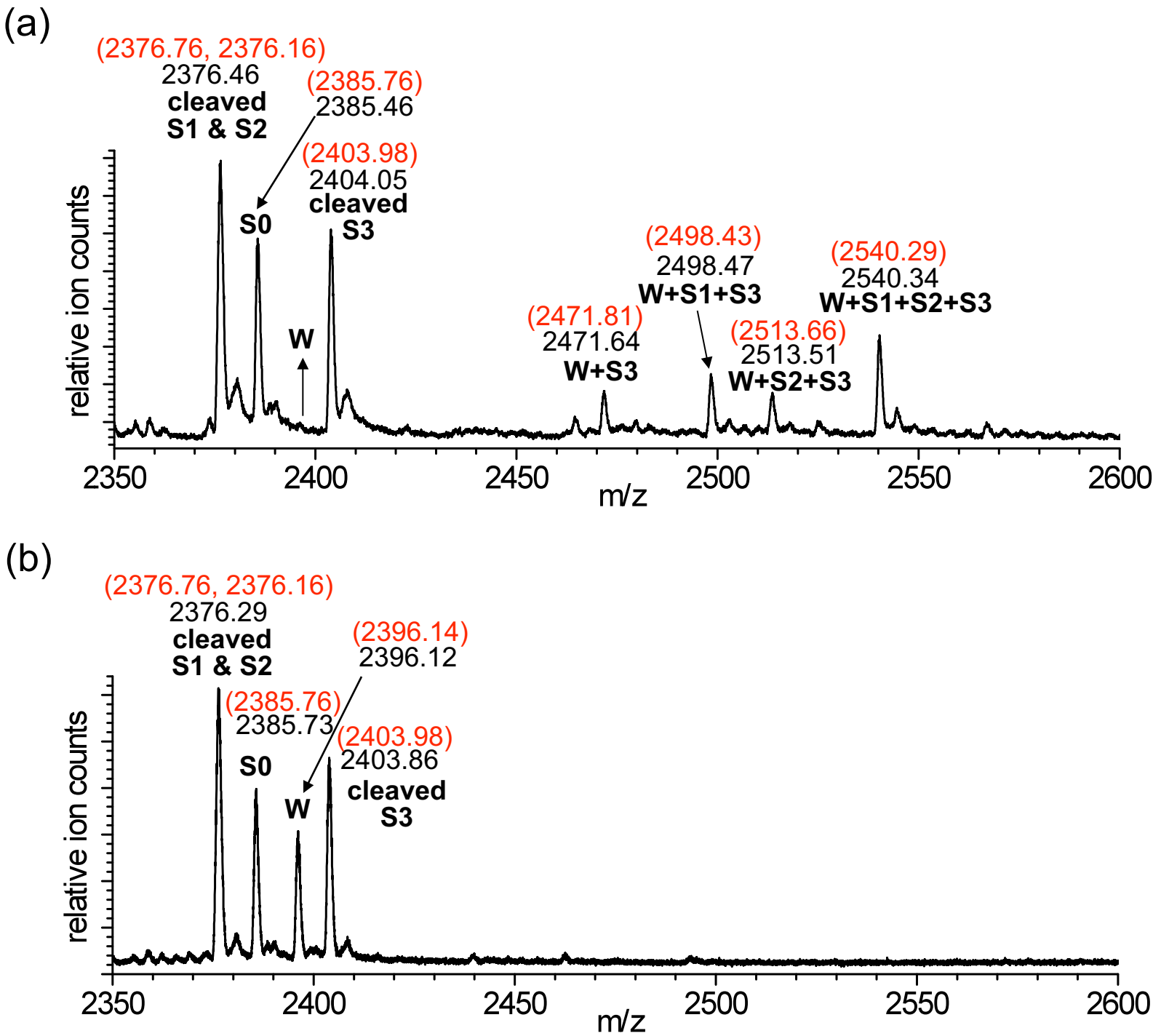
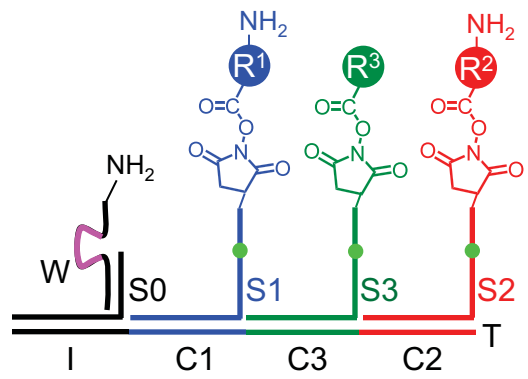
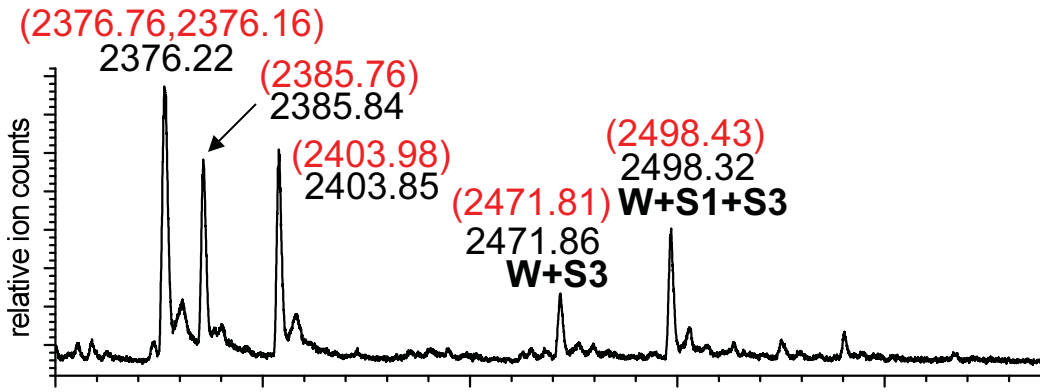
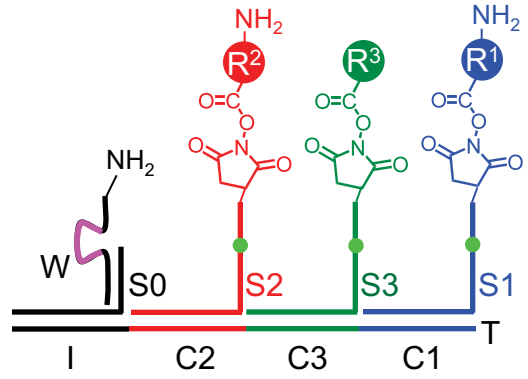
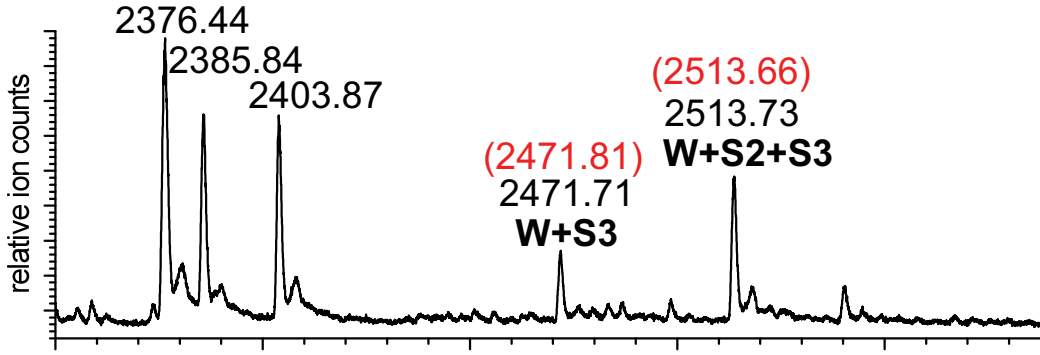
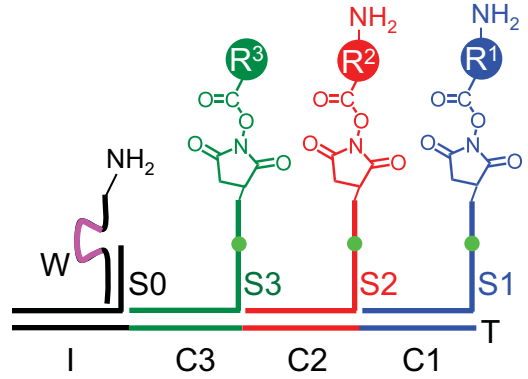
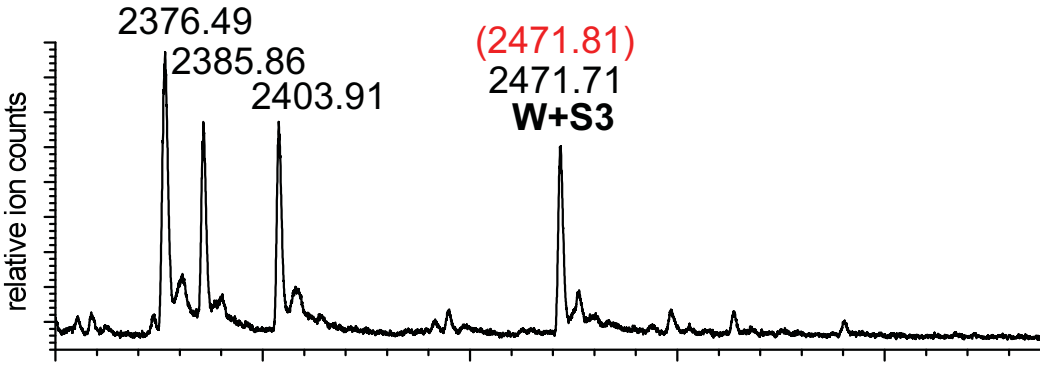
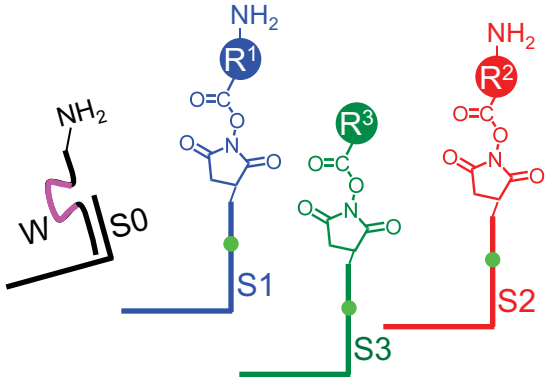
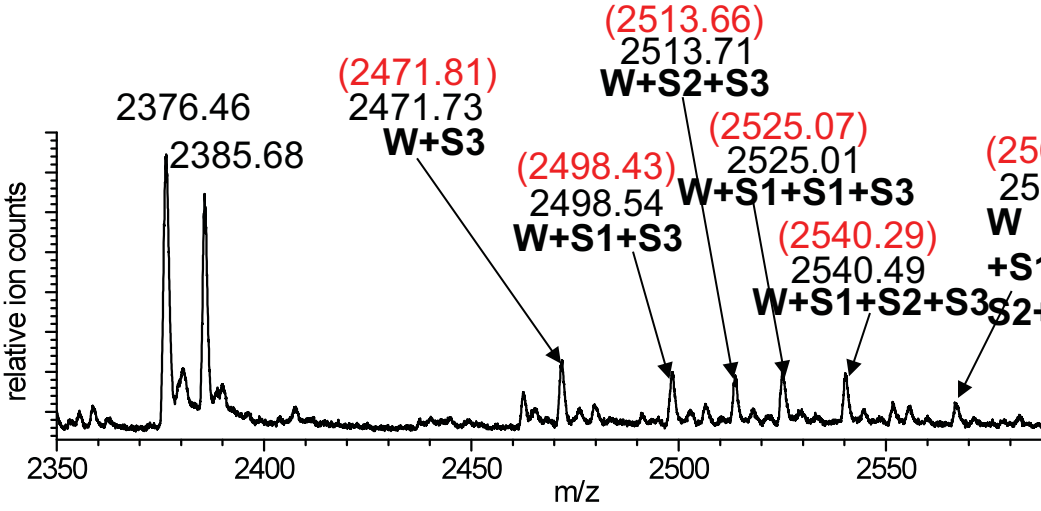


S2


(a)
1:1:1:1 mixture of authentic W+S3, W +S1+S3, W+S2+S3, and W+1+S2+S3
2498.33
W+S1+S3
2540.13
W+S1+S2+S3
2471.90
W+S3
2513.74
W+S2+S3
relative ion counts
2350
2400
2450
2500
2550
2600
m/z
(b)
15:25:15:45 mixture of authentic W+S3, W +S1+S3, W+S2+S3, and W+1+S2+S3
2498.37
25%
W+S1+S3
2540.13
45%
W+S1+S2+S3
2471.92
15%
W+S3
2513.52
15%
W+S2+S3
relative ion counts
2350
2400
2450
2500
2550
2600
m/z
(c)
3-step walking solution with 15:25:15:45 mixture of authentic W+S3, W+S1+S3, W+S2+S3, and W+1+S2+S3
2498.33
25%
W+S1+S3
2540.17
45%
W+S1+S2+S3
2471.72
15%
W+S3
2513.52
15%
W+S2+S3
relative ion counts
2350
2400
2450
2500
2550
2600
m/z
(d)
3-step DNAsome reaction
W
2498.47
W+S1+S3
2540.34
W+S1+S2+S3
2471.64
W+S3
2513.51
W+S2+S3
relative ion counts
2350
2400
2450
2500
2550
2600
m/z


(a)
NH2
S3a
3415.64 (3416.02)
S3a
relative ion counts
(b)
biotin
S2a
NH2
S3a
3415.52 (3416.02)
S3a
relative ion counts
(c)
biotin
?
NH2
S2a
S3a
T
3415.47 (3416.02)
S3a
relative ion counts
(d)
biotin
NH
S3a-biotin
3461.17 (3461.28)
authentic
S3a-biotin
relative ion counts
3360
3380
3400
3420
3440
3460
3480
3500
3520
m/z

2 with observed and expected m/z values:



3 with observed and expected m/z values: