## Data S1

## MALDI TOF mass data of cleavage products

Products from  $T_6(EU)T_6$ ;  $pT_6$  (P1), calcd  $C_{60}H_{79}N_{12}O_{43}P_6$  1842.2 [M-H]<sup>-</sup>; found 1841.8; T<sub>6</sub>pR (P2), calcd C<sub>66</sub>H<sub>90</sub>N<sub>13</sub>O<sub>45</sub>P<sub>6</sub> 1971.3 [M-H]<sup>-</sup>; found 1971.3; Product from (EU) $T_2AT_2GT_2$ ;  $pT_2AT_2GT_2$  (P1), calcd for  $C_{80}H_{103}N_{22}O_{54}P_8$  2484.6 [M-H]<sup>-</sup>; found 2484.6; Product from T<sub>2</sub>AT<sub>2</sub>GT<sub>2</sub>(EU)T; T<sub>2</sub>AT<sub>2</sub>GT<sub>2</sub>pR (P2), calcd for  $C_{86}H_{114}N_{23}O_{56}P_8$  2613.7 [M-H]<sup>-</sup>; found 2613.8; Products from  $T_5A(EU)AT_5$ ; pAT<sub>5</sub> (P1), calcd  $C_{60}H_{78}N_{15}O_{41}P_6$  1851.2 [M-H]<sup>-</sup>; found 1850.9;  $T_5ApR$  (P2), calcd C<sub>66</sub>H<sub>89</sub>N<sub>16</sub>O<sub>43</sub>P<sub>6</sub> 1980.3 [M-H]<sup>-</sup>; found 1980.2; Products from T<sub>5</sub>C(EU)CT<sub>5</sub>; pCT<sub>5</sub> (P1), calcd  $C_{59}H_{78}N_{13}O_{42}P_6$  1827.2 [M-H]<sup>-</sup>; found 1827.0;  $T_5CpR$  (P2), calcd  $C_{65}H_{89}N_{14}O_{44}P_6$  1956.3 [M-H]<sup>-</sup>; found 1956.3; Products from  $T_5G(EU)GT_5$ ; pGT<sub>5</sub> (P1), calcd C<sub>60</sub>H<sub>78</sub>N<sub>15</sub>O<sub>42</sub>P<sub>6</sub> 1867.2 [M−H]<sup>-</sup>; found 1867.2; T<sub>5</sub>GpR (P2), calcd  $C_{66}H_{89}N_{16}O_{44}P_6$  1996.3 [M-H]<sup>-</sup>; found 1996.2; Products from  $CGCA_2T(EU)TA_2CGC$ ; pTA<sub>2</sub>CGC (P1), calcd  $C_{58}H_{74}N_{23}O_{36}P_6$  1855.2 [M-H]<sup>-</sup>; found 1855.0; CGCA<sub>2</sub>TpR (P2), calcd C<sub>64</sub>H<sub>85</sub>N<sub>24</sub>O<sub>38</sub>P<sub>6</sub> 1984.3 [M-H]<sup>-</sup>; found 1984.3. R (C<sub>6</sub>H<sub>11</sub>NO<sub>2</sub>) was calculated on the supposition that the cleavage reaction was accompanied by elimination of EU and addition of methylamine and OH-.