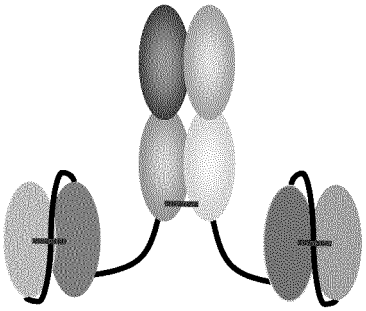
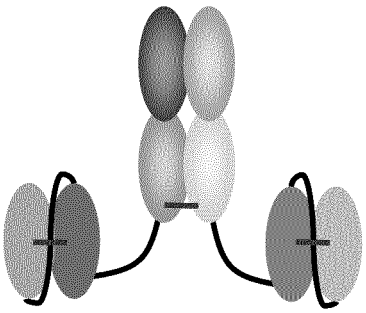
Figure 1:

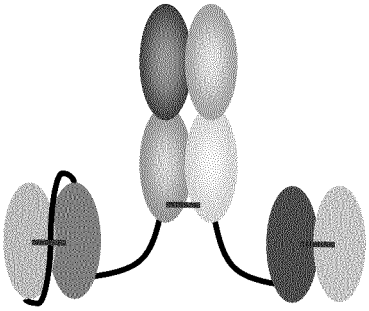
Fab-2x dsscFv formats and Fab-dsscFv-dsFv format



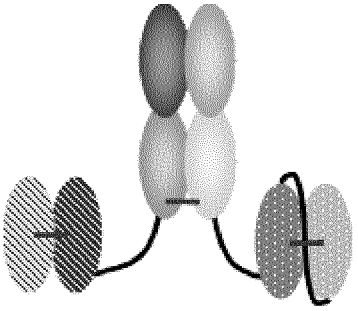
Fab#2-(HC)-dsscFv#3-(LC)-dsscFv#4



Fab#2-(LC)-dsscFv#3-(HC)-dsscFv#4



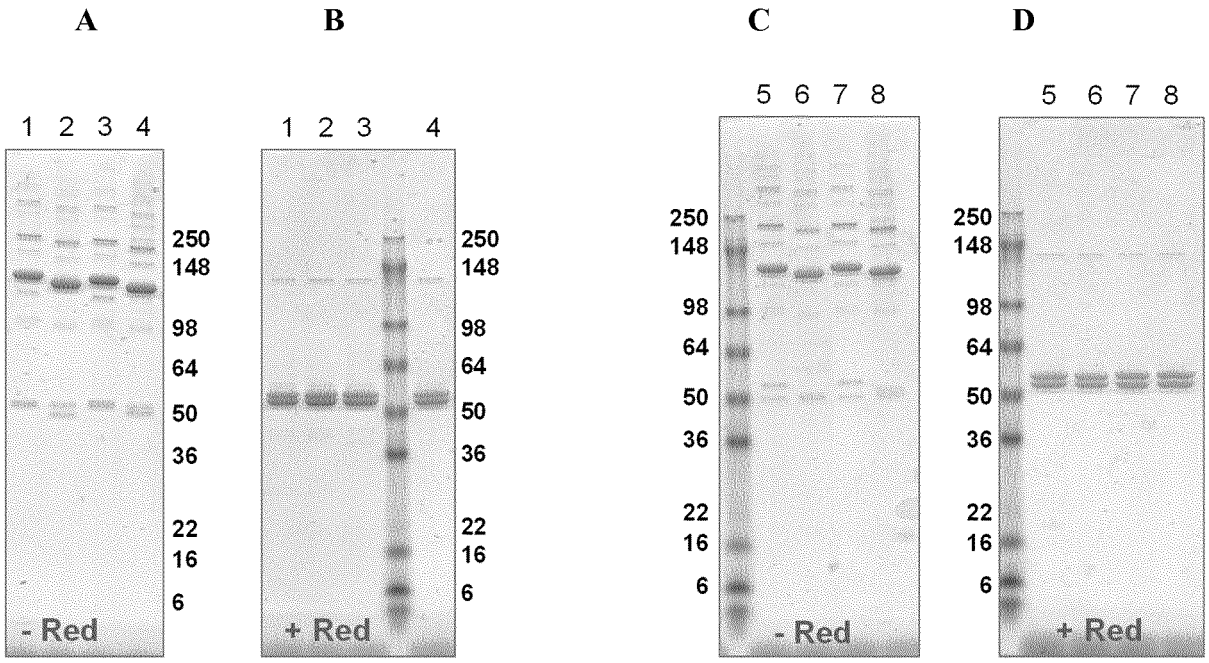
Fab-(HC)dsscFv-(LC)dsFv



Fab-(HC)dsFv-(LC)dsscFv

Figure 2:

SDS-PAGE analysis of protein G-purified, HEK293-expressed Fab-1xdsscFv, 1xscFv and Fab-2xdsscFv proteins

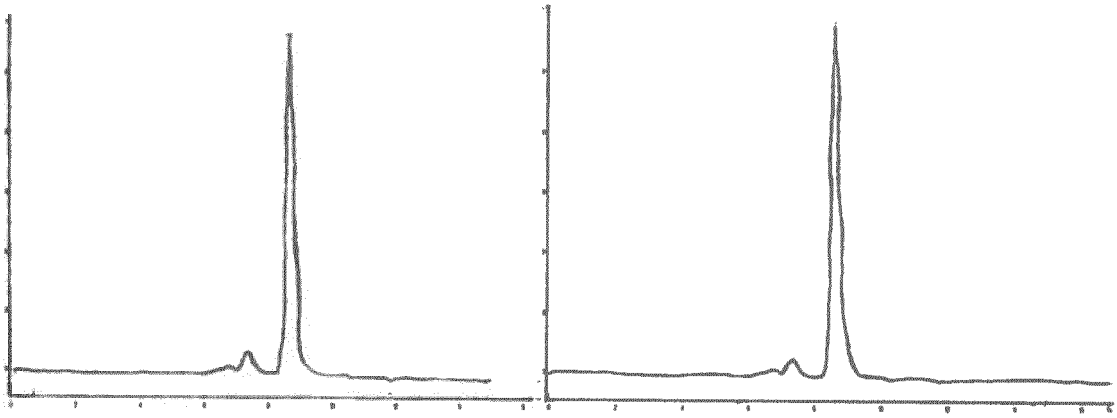


1. Fab#2-(HC) dsHLscFv#3, (LC) HLscFv#4
2. Fab#2-(HC)dsHLscFv#3, (LC)dsHLscFv#4
3. Fab#2-(HC)dsHLscFv#3, (LC)LHscFv#4
4. Fab#2-(HC)dsHLscFv#3, (LC)dsLHscFv#4

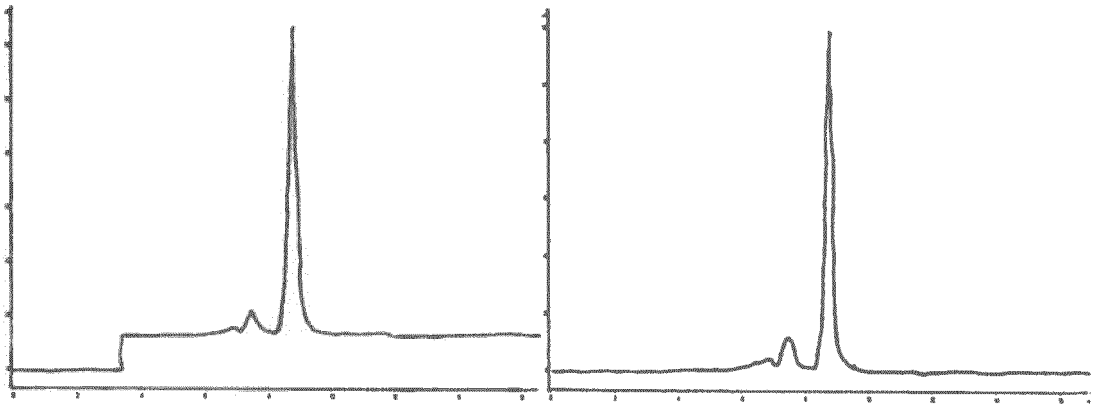
5. Fab#2-(LC)dsHLscFv#3, (HC)HLscFv#4
6. Fab#2-(LC)dsHLscFv#3, (HC)dsHLscFv#4
7. Fab#2-(LC)dsHLscFv#3, (HC)LHscFv#4
8. Fab#2-(LC)dsHLscFv#3, (HC)dsLHscFv#4

Figure 3: G3000 SE HPLC analysis of protein G-purified, HEK293-expressed Fab-1xdsscFv, 1xscFv and Fab-2xdsscFv proteins

1. Fab#2 HC-dsHL#3 LC-HL#4: 86% monomer **2.** Fab#2 HC-dsHL#3 LC-dsHL#4: 89% monomer



3. Fab#2 HC-dsHL#3 LC-LH: 84% monomer **4.** Fab#2 HC-dsHL#3 LC-dsLH#4: 83% monomer



5. Fab#2 LC-dsHL#3 HC-HL#4: 85% monomer **6.** Fab#2 LC-dsHL#3 HC-dsHL#4: 88% monomer

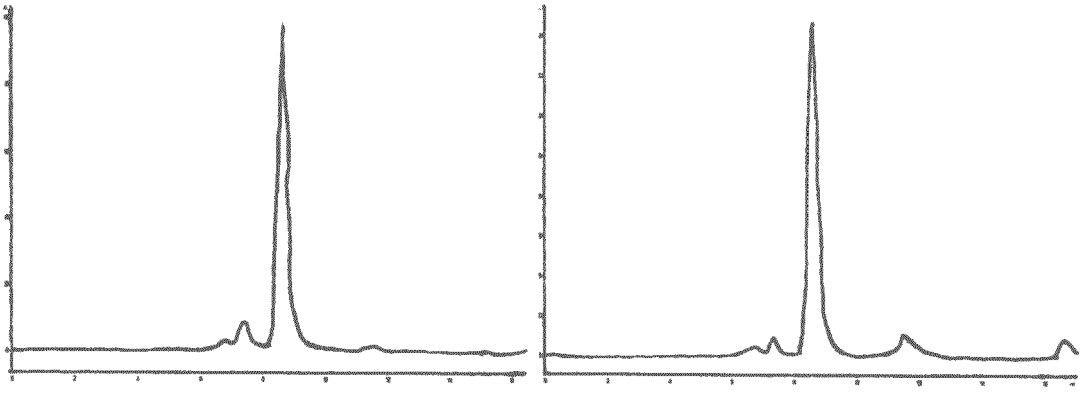


Figure 3 continued

7. Fab#2 LC-dsHL#3 HC-LH#4: 88% monomer **8.** Fab#2 LC-dsHL#3 HC-dsLH#4: 83% monomer

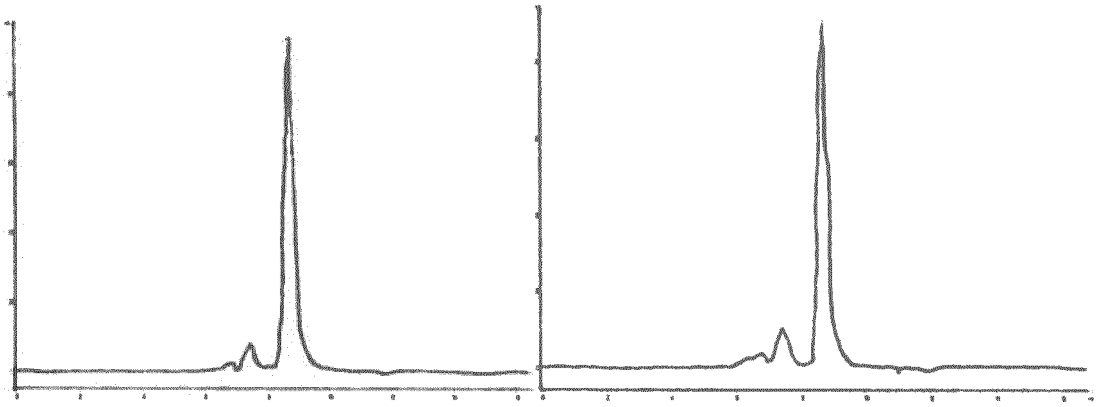
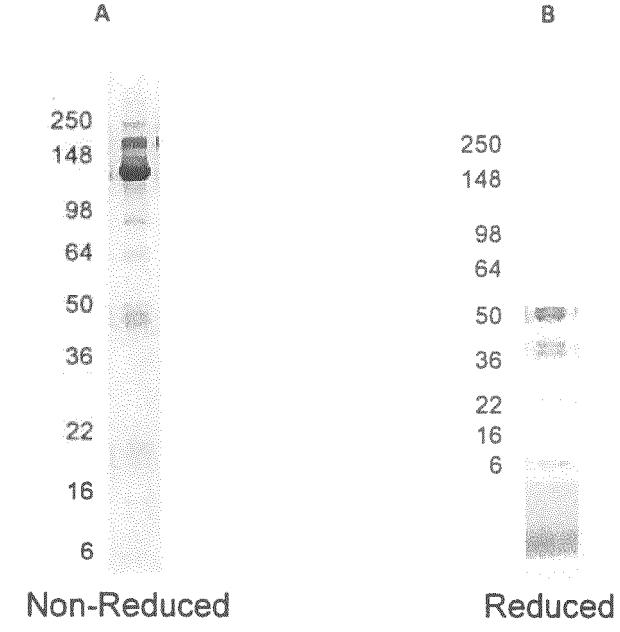
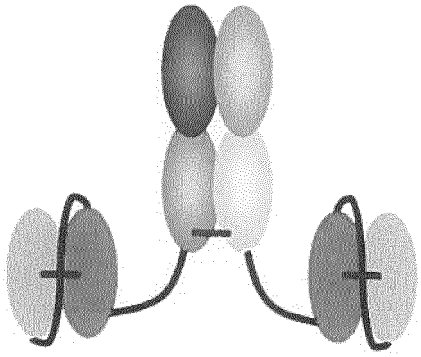


Figure 4: SDS-PAGE analysis of purified, HEK293-expressed Fab-2xdsscFv#3 proteins





Fab#2-(HC)dsscFv#3-(LC)dsscFv#3

Figure 5: S200 SE HPLC analysis of purified, HEK293-expressed Fab-2xdsscFv#3 proteins

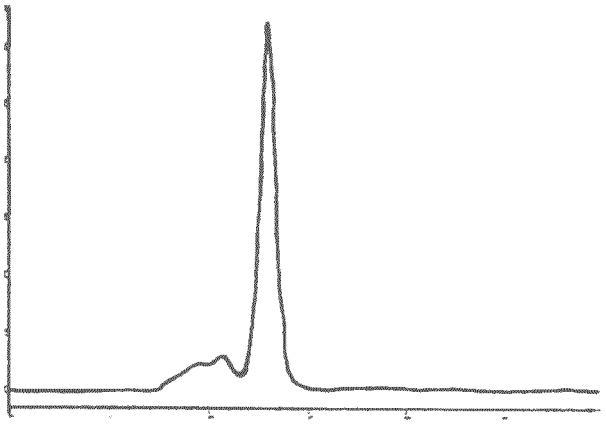
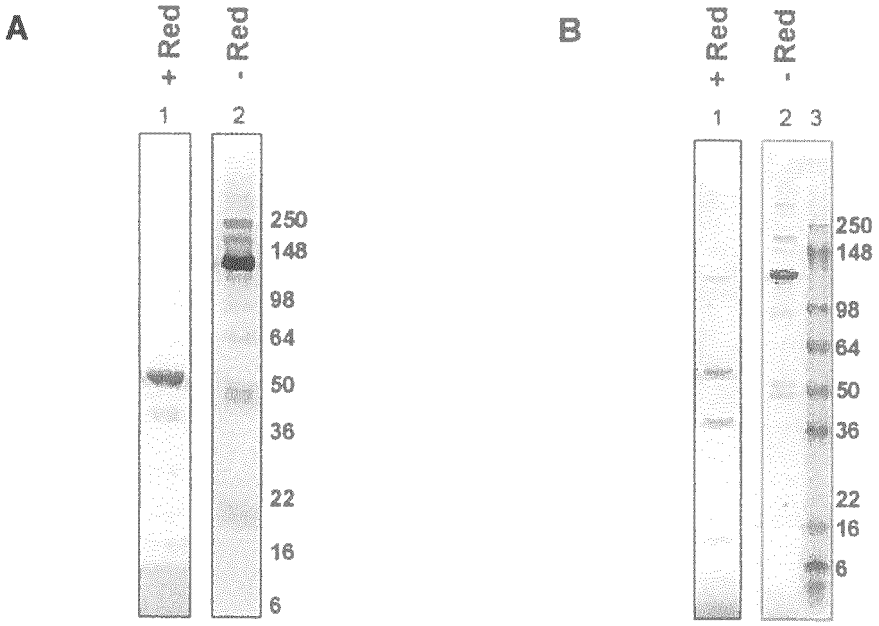


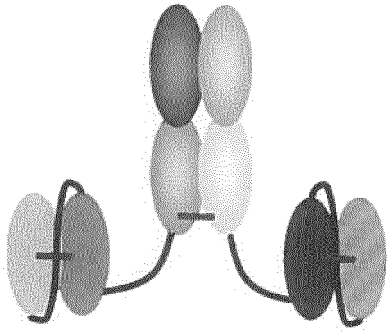
Figure 6: **SDS-PAGE analysis of protein G-purified, HEK293 expressed Fab#2-(HC)dsscFv#3-(LC) dsscFv#1 and Fab#2-(HC)dsscFv#3-(LC)dsFv#1 (LC-vL linked) proteins**



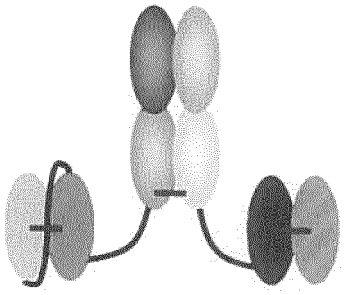
1. Fab#2-(HC)dsscFv#3-(LC)dsscFv#1, reduced
2. Fab#2-(HC)dsscFv#3-(LC)dsscFv#1, non-reduced

1. Fab#2-(HC)dsscFv#3-(LC)dsFv#1, reduced
2. Fab#2-(HC)dsscFv#3-(LC)dsFv#1, non-reduced
3. SeeBluePlus2 MW ladder

Figure 6 Continued



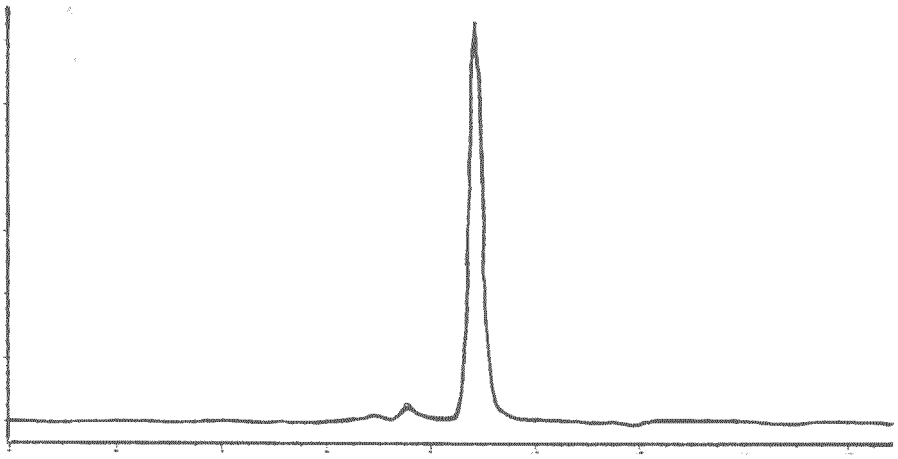
Fab-(HC)dsscFv-(LC)dsscFv



Fab-(HC)dsscFv-(LC)dsFv

Figure 7: G3000 SE HPLC analysis of protein G-purified, HEK293 expressed Fab#2-(HC)dsscFv#3-(LC)dsscFv#1 and Fab#2-(HC)dsscFv#3-(LC)dsFv#1 (LC-vL linked) proteins

Fab#2-(HC)dsscFv#3-(LC)dsFv#1: 91% monomer



Fab#2-(HC)dsscFv#3-(LC)dsscFv#1: 30% monomer

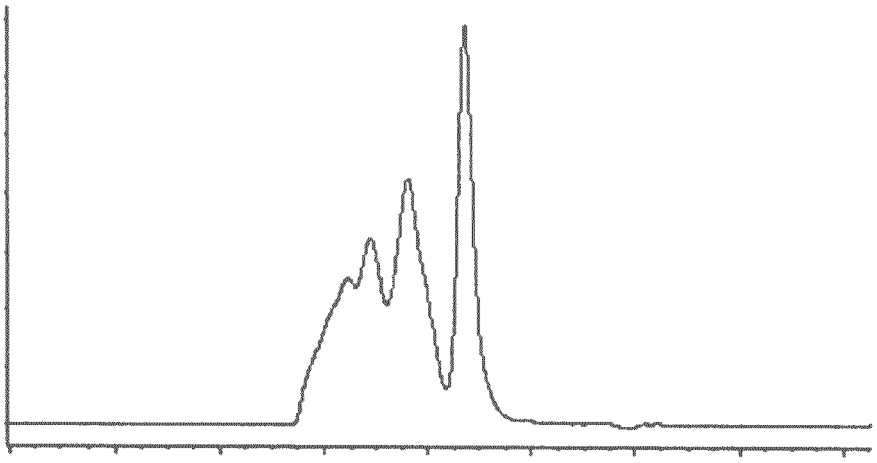
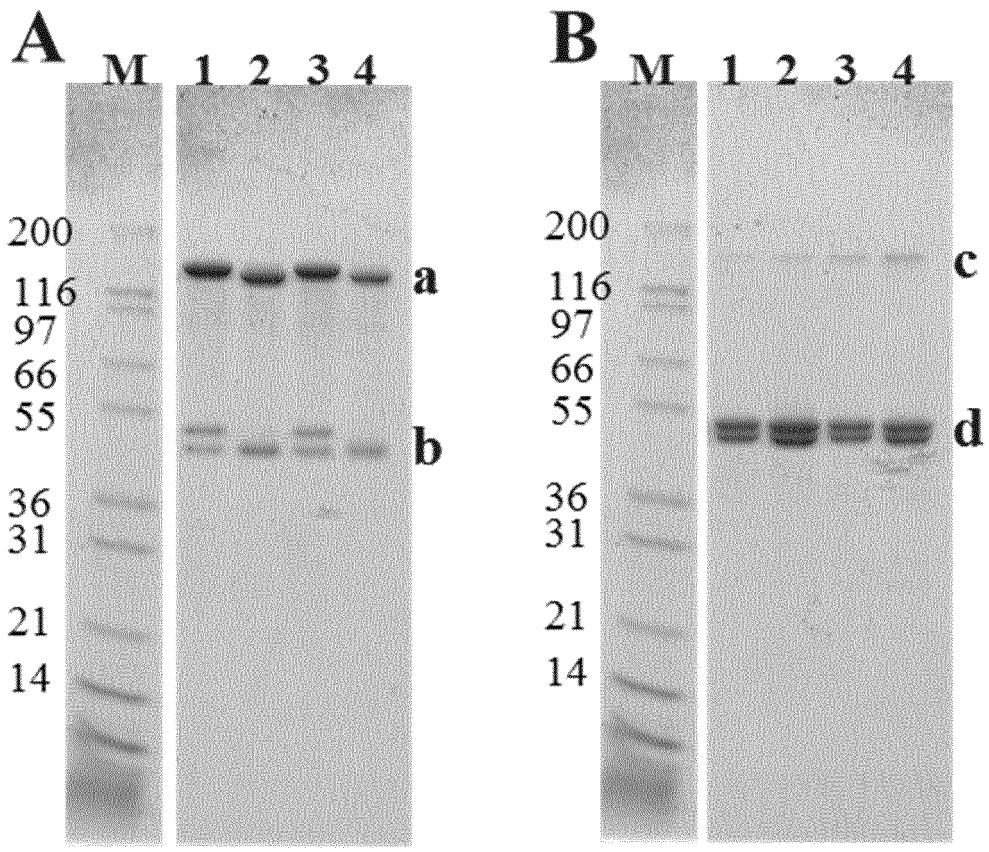


Figure 8 SDS-PAGE Analysis under Reducing Conditions



M: Mark12 protein standard (Life Technologies)
1. Fab#2-(LC)dsHLscFv#3,(HC)HLscFv#4
2. Fab#2-(LC)dsHLscFv#3,(HC)dsHLscFv#4
3. Fab#2-(LC)dsHLscFv#3,(HC)LHscFv#4
4. Fab#2-(LC)dsHLscFv#3,(HC)dsLHscFv#4

Figure 9

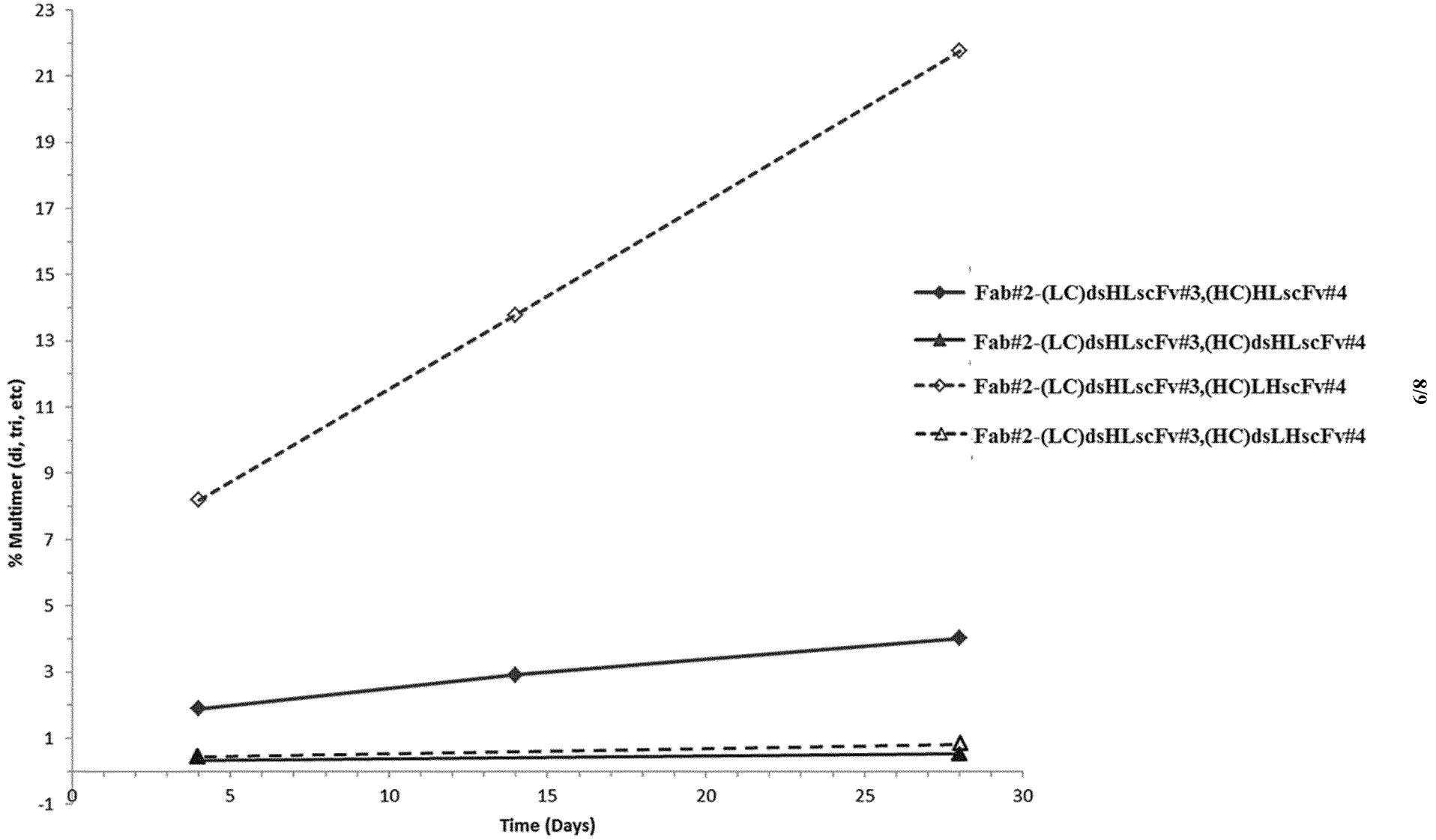
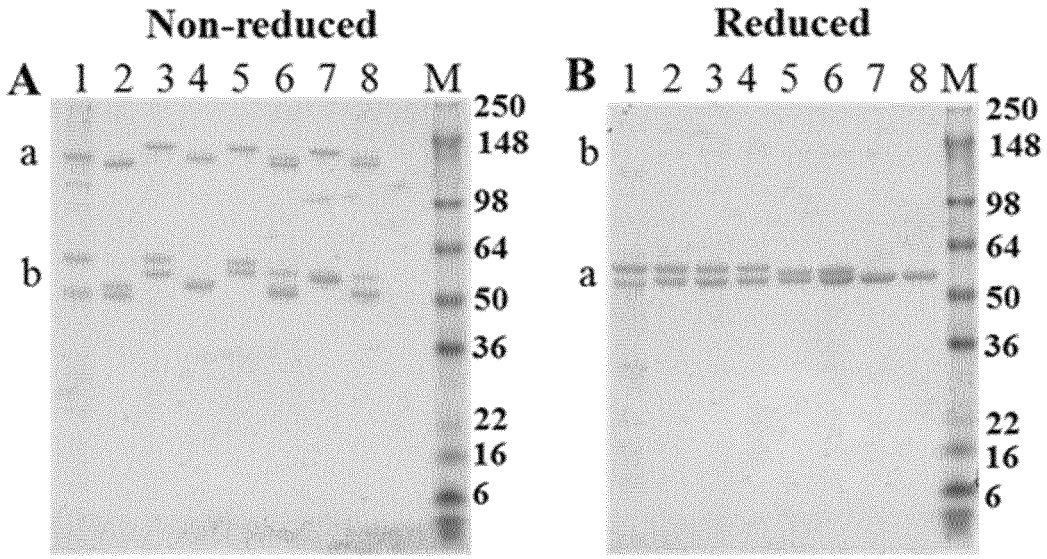

% Multimer (di, tri, etc)
Time (Days)
Fab#2-(LC)dsHLscFv#3,(HC)HLscFv#4
Fab#2-(LC)dsHLscFv#3,(HC)dsHLscFv#4
Fab#2-(LC)dsHLscFv#3,(HC)LHscFv#4
Fab#2-(LC)dsHLscFv#3,(HC)dsLHscFv#4

Figure 10 SDS-PAGE analysis of Protein-G purified, EXPiHEK expressed Fab-2xscFv and Fab-2xdsscFv formats



1. Fab#4-(LC)HLscFv#5,(HC)HLscFv#6
2. Fab#4-(LC)dsHLscFv#5,(HC)dsHLscFv#6
3. Fab#4-(LC)HLscFv#7,(HC)HLscFv#8
4. Fab#4-(LC)dsHLscFv#7,(HC)dsHLscFv#8
5. Fab#4-(LC) HLscFv#9,(HC)LHscFv#10
6. Fab#4-(LC)dsHLscFv#9,(HC)dsLHscFv#10
7. Fab#4-(LC)HLscFv#7,(HC)LHscFv#10
8. Fab#4-(LC)dsHLscFv#7,(HC)dsLHscFv#10

M. Seeblue2 protein standard markers (Life Technologies)