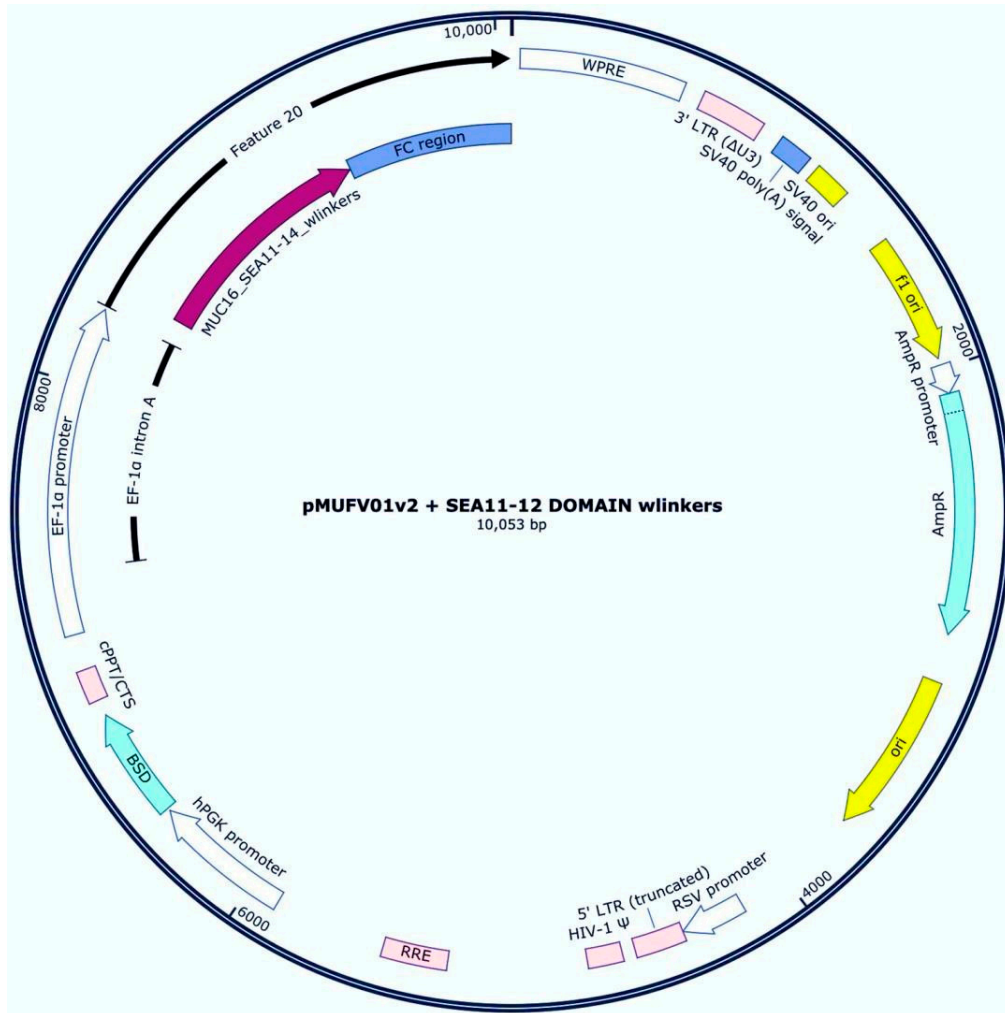
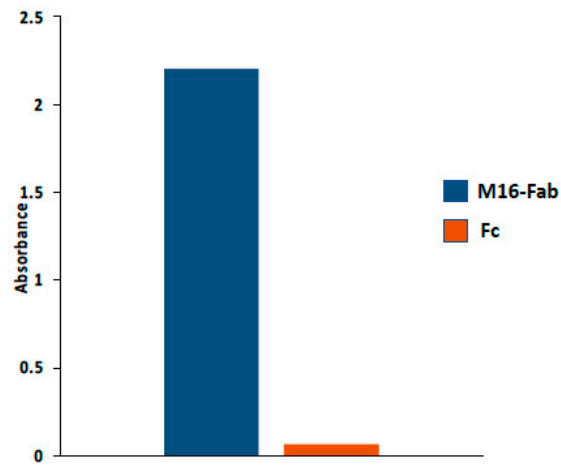


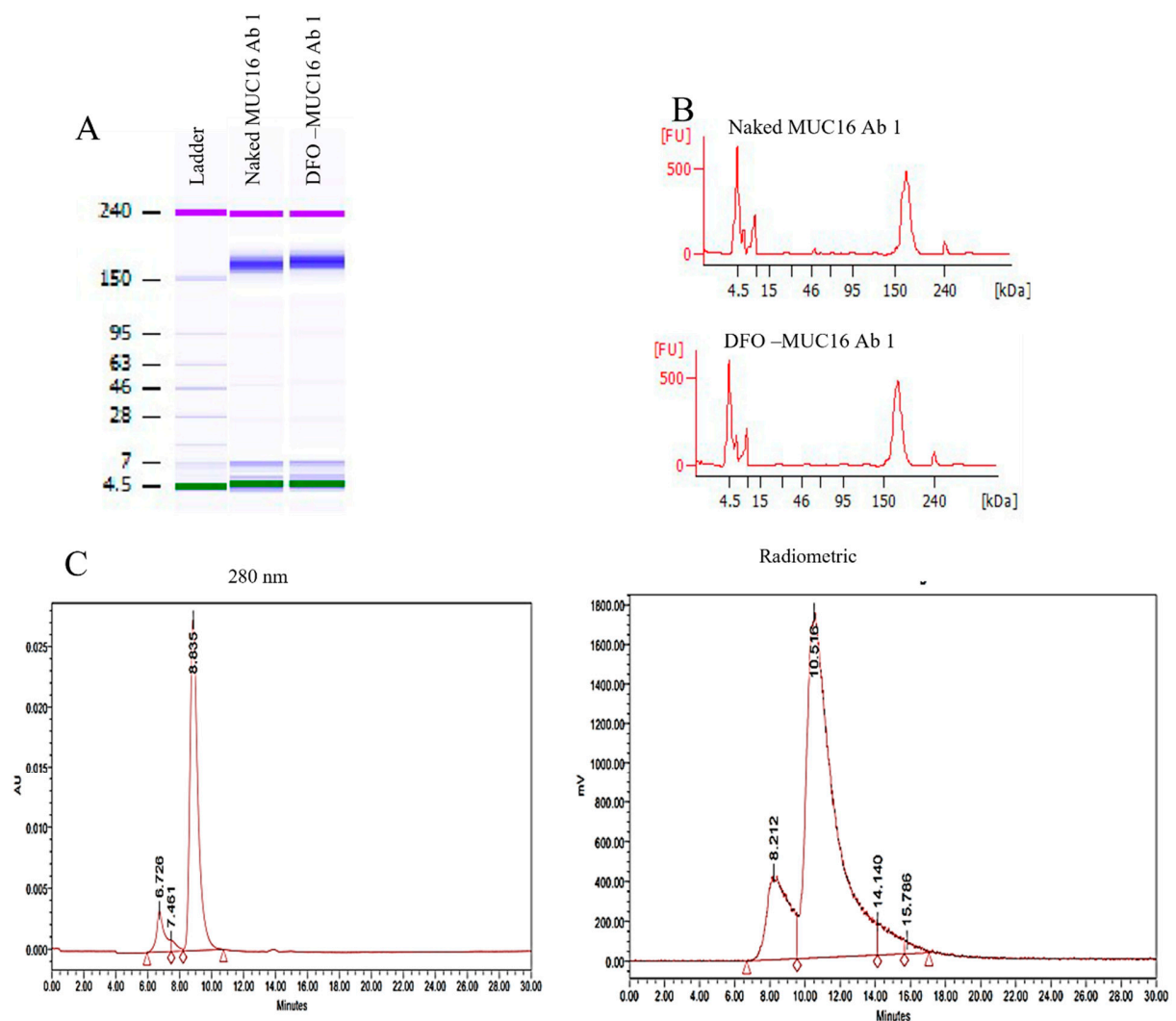
## Supplementary Information



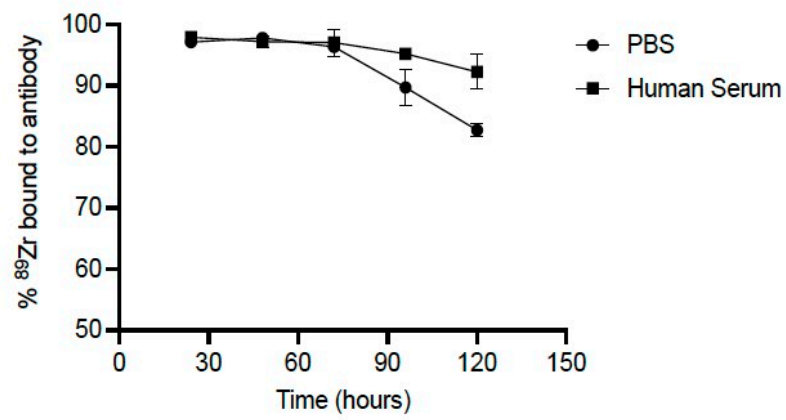
**Supplementary Figure S1:** SEA11-12 domain of MUC16 cloned into pMUFV-01-Fc a custom lentiviral vector



**Supplementary Figure S 2:** Clone ELISA illustrating binding specificity of M16-Fab tested with SEA 11-12 domain recombinant protein (blue) and Fc protein as negative control (orange). All 48 clones displayed the same signal and were the same sequence.



**Supplementary Figure S3: (A and B)** Bioanalyzer ladder (A) and chromatograms (B) of ladder, M16Ab and DFO-M16Ab. **(C)** Representative size exclusion (SEC) HPLC chromatograms showing stability of M16Ab, DFO-M16Ab and  $^{89}\text{Zr}$ -DFO-M16Ab. UV channel (280) and radiometric channels are shown.



**Supplementary Figure S4:** Stability studies of  $^{89}\text{Zr}$ -DFO-M16Ab at room in human plasma and PBS at 37°C