



Figure 6 - figure supplement 1. X-baToN systems enable fluorescent labeling via various antigen-nanobody/scFV pairs.

a. Schematic of the surface BFP (sBFP)-baToN system. Sender cells (marked by intracellular tdTomato+) express sBFP and receiver cells express αGFP.

b. The cross reactivity of αGFP with BFP allows BFP to be transferred from sBFP sender cells to αGFP receiver cells. sBFP sender cells and αGFP receiver cells were co-cultured at 1:1 ratio for 24 hours. Receivers were defined as toTomato^{neg}BFP^{pos} cells. BFP MFI of receiver cells is shown as mean ± SD of triplicate cultures.

c. Schematic of the surface mCherry (smCherry)-baToN system. Sender cells (marked by intracellular GFP) express smCherry and receiver cells express αmCherry (tagged by intracellular BFP).

d. The pairing between mCherry and αmCherry enable mCherry transfer from smCherry 293 Sender cells to αmCherry-expressing 293 Receiver cells. smCherry sender cells are not able to transfer mCherry to αGFP receiver cells. smCherry sender cells were co-cultured with αGFP or αmCherry receiver cells at a 1:1 ratio for 24 hours. Receiver cells were defined as GFP^{neg}BFP^{pos} cells. mCherry MFI of receiver cell is shown as mean ± SD of triplicate cultures.

e. Schematic of the surface GCN4 (sGCN4)-baToN system. Sender cells (marked by intracellular 2A-mCherry) express cell surface 4X GCN4 peptide fused with GFP. Receiver cells express a cell surface anti-GCN4 single-chain variable fragment (scFV; αGCN4, tagged by intracellular BFP).

f. The pairing between GCN4 and αGCN4 enables co-transfer of GFP from 4X sGCN4-GFP sender cells to αGCN4 receiver cells 24 hours after co-culture at a 1:1 ratio. Receiver cells were defined as mCherry^{neg}PI^{neg}BFP^{pos} cells. GFP MFI of receiver cells are shown as mean ± SD of triplicate cultures. sGFP sender cells are not able to transfer GFP to αGCN4 receiver cells.