

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: HEK 293T cells aligned sequences. DNA cloned sequence reads we obtained after *egfp* inversion by Int activity in pSG plasmids in HEK 293T cells aligned with the expected flipped sequence.

File Name: Supplementary Data 2

Description: Bovine fibroblasts aligned sequences. DNA cloned sequence reads we obtained after *egfp* inversion by Int activity in pSG plasmids in fibroblasts aligned with the expected flipped sequence.

File Name: Supplementary Data 3

Description: *A. thaliana* protoplasts aligned sequences. DNA cloned sequence reads we obtained after *egfp* inversion by Int activity in pSG plasmids in protoplasts aligned with the expected flipped sequence.

File Name: Supplementary Data 4

Description: *A. thaliana* protoplasts aligned sequences. DNA cloned sequence reads obtained after CaMV 35S promoter inversion by Int activity in pSP plasmids in protoplasts aligned with the expected flipped sequence.

File Name: Supplementary Data 5

Description: PBMCs aligned sequences. DNA cloned sequence reads we obtained after *egfp* inversion by Int activity in pSG plasmids in PBMCs from three donors aligned with the expected flipped sequence.