Supplemental Table 1. Genetics of the RAB27A-deficient patients used for lentiviral transduction

| Patient | Gender | RAB27A variants | Diagnosis |
|---------|--------|----------------|-----------|
| 1       | M      | Hmz c.514-518delCAAGC; p.Gln172NfsX2 | GS2       |
| 2       | F      | Hmz c.514-518delCAAGC; p.Gln172NfsX2 | GS2       |
| 3       | M      | Hmz c.148-149delAGinsC; p.Arg50GlnfsX35 | GS2       |
| 4       | F      | Hmz c.514-518delCAAGC, p.Gln171NfsX2 | GS2       |

FIGURE LEGENDS

Sup. Fig. 1. Flow cytometry gating strategy for transduced CD8+ T cells. CD8+ T cells from GS2 patients as well as healthy controls were isolated, transduced with lentiviruses encoding mCherry-tagged RAB27A constructs and then stimulated for evaluation of T cell receptor triggered degranulation. (A) Plots show the gating strategy for CD8+ T cells from one representative patient. Plots to the right depict the transduction efficiency as revealed by mCherry expression for the RAB27A WT and p.R184Q constructs. (B) Plots show gating of CD8+ T cells from GS2 patients based on mCherry expression (left column) and CD107a surface expression following anti-CD3 stimulation (right column) of cells transduced with RAB27A WT and p.R184Q constructs, respectively, from one representative GS2 patient. (C) Quantification of the frequency of mCherry+ (high expression) CD8+ T cells following lentiviral transduction of cells from four GS2 patients with different RAB27A constructs, as indicated. (D) Quantification of the MFI of mCherry+ (high expression) CD8+ T cells following lentiviral transduction of cells from four GS2 patients with different RAB27A constructs, as indicated.