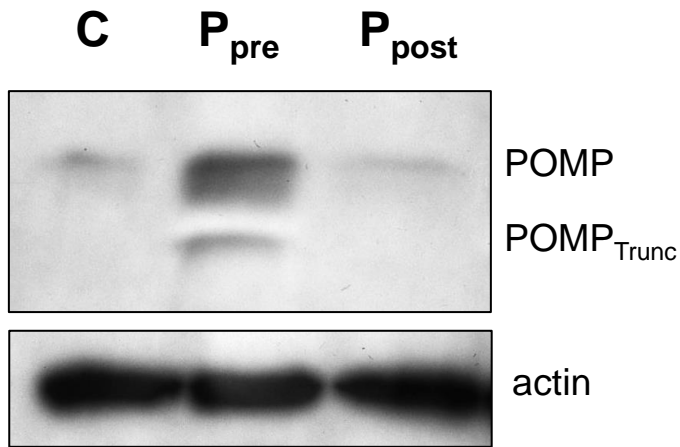


## Online Resource 4



Immunodetection of POMP in PBMC. An analysis prior to HSCT (P<sub>pre</sub>) confirms the presence of truncated POMP (POMP<sub>trunc</sub>), as detected in P1's fibroblasts (Figure 1). Analysis of PBMC taken 31 months post HSCT (P<sub>post</sub>) demonstrates full and sustained correction with POMP expression comparable to a healthy and age-matched control (C). The higher level of POMP/truncated POMP in the patient sample prior to HSCT is most likely reflecting an Nrf-mediated feedback response leading to increased expression of genes encoding proteasome subunits and POMP as a consequence of the reduced efficiency of proteasome assembly and maturation (Ebstein et al., *Frontiers Immunol.* 201; doi: 10.3389/fimmu.2019.02756), or reflecting type-I-IFN induction of POMP expression (Heink et al., *PNAS* 2005; DOI: 10.1073/pnas.0501711102), or both.