



**Figure S10. FOXO1 downregulation with ASO.**

A) Log2 fold change (FC) of gene expression downstream AKT1 in GBA-PD samples against WT. B) Representative Western Blot (WB) image showing FOXO1 protein levels after NESC treatment with customised ASOs and negative control (NC). C) Quantification of FOXO1 protein levels relative to the  $\beta$ -Actin in NESC samples. D) Representative WB image showing FOXO1 protein levels after midbrain organoid treatment for 28 days with ASO3 and NC. E) Quantification of FOXO1 protein levels relative to the  $\beta$ -Actin in midbrain organoid samples. F) Immunofluorescent staining of FOXO1 in midbrain organoids after 28 days of treatment with ASO3 and NC. G) Quantification of FOXO1 positive pixel area normalised to the Hoechst pixel area.