

### Legends to Supplemental Figures

**Fig. 1S Effects of TM7SF3-siRNA on iNOS mRNA levels in human islets.** Dispersed human islets were transfected for 48h with TM7SF3-siRNA or with a non-targeting sequence (control). Cells were treated with cytokines '3X' for 4 h. Then, RNA was extracted and quantified by qRT-PCR. Bar-graphs are the mean $\pm$  SEM of three independent experiments in duplicates.

**Fig. 2S Effects of TM7SF3-siRNA on spliced Xbp1 mRNA levels and ATF6 cleavage in MIN6 cells.** MIN6 cells were transfected for 48h with TM7SF3-siRNA or with a non-targeting sequence (control). Cells remained untreated or were treated with thapsigargin (Thap 100nM) for 16 h. RNA was extracted and spliced-Xbp1 mRNA levels were quantified by qRT-PCR (a). Bar-graphs are the mean $\pm$  SEM of 5 independent experiments in duplicates. Total cell extracts were resolved by SDS-PAGE and immunoblotted with the indicated antibodies (b).

**Fig. 3S Efficiency of silencing of p53 protein expression in HepG2 and HCT116 cells.** HepG2 were transfected for 24h with p53-siRNA or with a Non-targeting sequence (control). Then the cells were treated with nutlin (10  $\mu$ M) for the indicated periods of time (a). Alternatively, HepG2<sup>sh-con</sup> and HepG2<sup>sh-p53</sup> (b), as well as naïve HCT-116 and HCT<sup>p53-/-</sup> cells (c), were treated with nutlin (10  $\mu$ M) for the indicated periods of time. Total cell extracts were resolved by SDS-PAGE and immunoblotted with the indicated antibodies. Results are representatives of at least two experiments in duplicates.

**Fig. 4S Effects of nutlin on TM7SF3 mRNA levels.** Naïve HCT-116 and HCT<sup>p53-/-</sup> cells (a, b) as well as MCF10A cells (c, d) were treated with nutlin (10  $\mu$ M) for the indicated periods of time (a, b) or for 8h (c, d). Alternatively, HepG2 cells (e, f) were transfected for 48h with 25 nM of p53-siRNA or with a Non-targeting sequence. Cells were then treated with nutlin (10  $\mu$ M) for 16 h or were left untreated. RNA was extracted and quantified by qRT-PCR. Graphs are the mean $\pm$  SEM of three independent experiments.