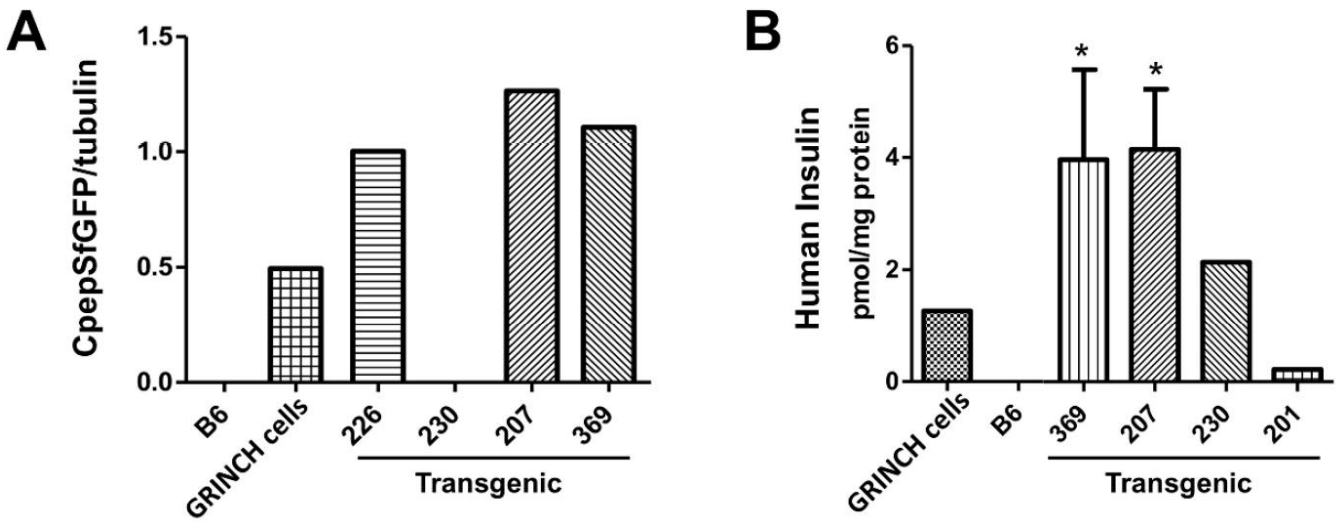
SUPPLEMENTARY DATA

Supplementary Figure S1. Relative abundance of CpepSfGFP and human insulin in the islets of transgenic hPro-CpepSfGFP mice. Pancreatic islets were isolated from transgenic hPro-CpepSfGFP mice derived from the founder lines shown. The GRINCH beta cell line (5) served as a positive control. **A:** Western blotting with anti-GFP established that mouse lines #207 and #369 were the two strongest founders for expression of CpepSfGFP; results normalized to islet tubulin. **B:** Human insulin immunoassay established that mouse lines #207 and #369 were the two strongest founders for expression of human insulin; results normalized to total islet protein.



SUPPLEMENTARY DATA

Supplementary Figure S2. Real time imaging of secretory granule exocytosis from primary beta cell of hProCpepSfGFP mouse. Spinning disk confocal microscopy with continuous images at 200 msec intervals of a beta cell perfused at 37°C with KRBH containing 60 mM KCl as described in Methods. The first evidence of exocytosis was detected at 24 s after starting stimulatory perfusion; this movie begins at 33 s and plays in real time. Scale bar = 5 μm. Kinetic analysis of a single exocytotic event is shown in Fig. 6B; the results shown are representative of multiple independent beta cells.