ESM Table 1

Donor no.	Gender	Age	BMI
1	F	22	22.8
2	F	52	20.4
3	M	64	27.5
4	F	60	23.6
5	M	34	23.1
6	M	50	24.8

Anthropometric data from pancreatic donors. None of the donors had diabetes.

ESM Table 2

Primers, rat:

Genes	Forward	Reverse
Slc5a1	GACTGATTCTCGGCTTCCTG	GTGAGGAGGGAGATGACCAA
Slc5a2	TTCTGGGGCTTACCATTGTC	TTAGAGCAGCCCACCTCAGT
Slc5a4a	GGGAACAGCACTGCCTAGAG	AGATCGACCAGCCAGAAAGA
Slc5a4b	TTCCACATCTTCCGAGATCC	CAGCTTCAGGTAGCCACACA
Slc2a1	GCCCTGGATGTCCTATCTGA	CCCACGATGAAGTTTGAGGT
Slc2a2	CAATTTCATCATCGCCCTCT	TGCAGCAATTTCGTCAAAAG
Slc2a3	CGAGAGTCCAAGGTTCTTGC	ACTGGAGGACAACGGAGATG
Slc2a4	GCTTCTGTTGCCCTTCTGTC	TGGACGCTCTCTTTCCAACT
Slc2a5	TGGAAAGATGTGGACATGGA	CACATATTGGACGTCGTTGC
Hprt1	GCAGACTTTGCTTTCCTT	CCGCTGTCTTTTAGGCTT

Primers, human:

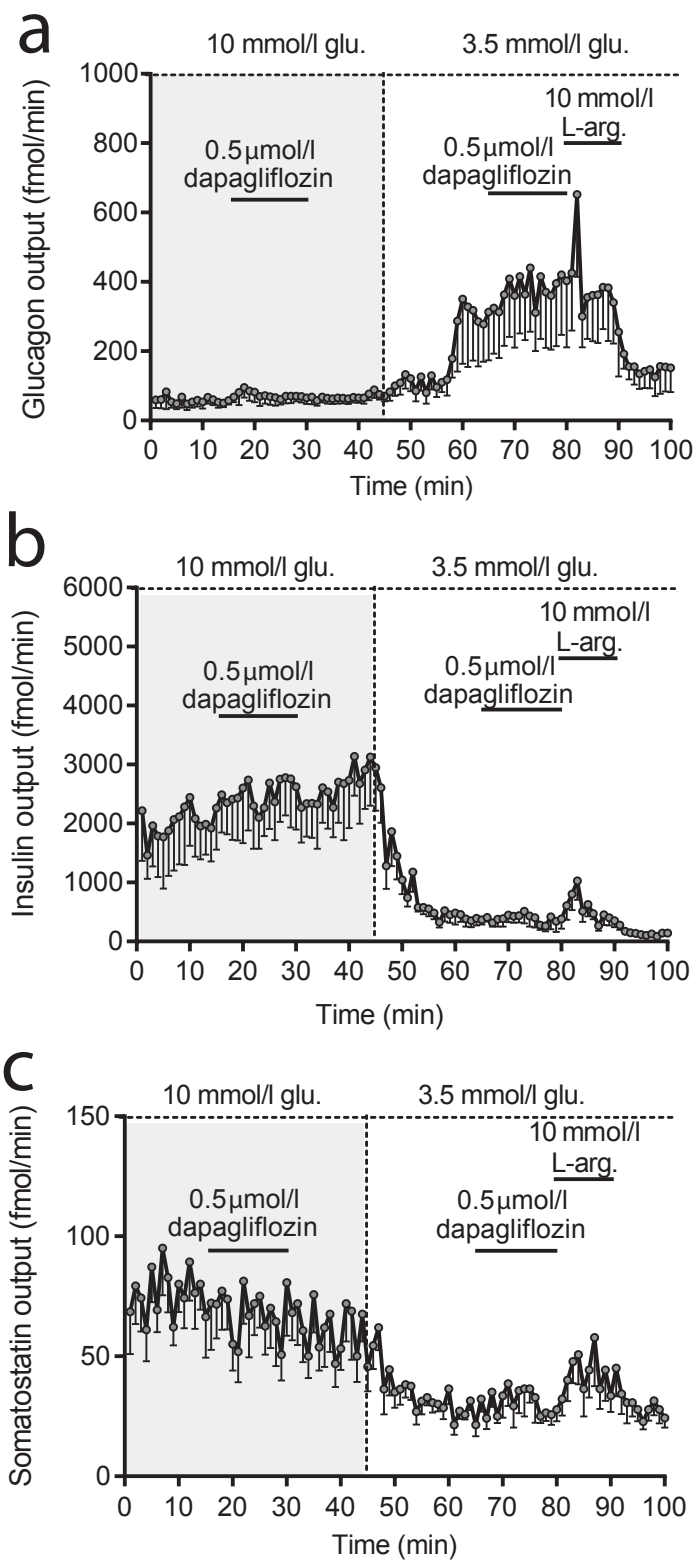
Genes	Forward	Reverse
SLC5A1	TGCTGGTGGGGTCTTTAATC	GGATCTCGGAAGATGTGGAA
SLC5A2 (# 1)	AGTGCCTGCTCTGGTTTTGT	TTAGGCATAGAAGCCCCAGA
SLC5A2 (# 2)	GACATGTTCTCCGGAGCTGT	GCTCCCAGGTATTTGTCGAA
SLC5A4A	CATAGCTGAGACCCCAGAGC	GCGAGGAAGAAGCCTCCTAT
SKC2A1	CTTCACTGTCGTGTCGCTGT	TGAAGAGTTCAGCCACGATG
SLC2A2	GGAGTTGGCGCTGTAAACAT	AAACTCAGCCACCATGAACC
SLC2A3	ACCGGCTTCCTCATTACCTT	AGGCTCGATGCTGTTCATCT
SLC2A4	CTTCGAGACAGCAGGGGTAG	AGGAGCAGAGCCACAGTCAT
SLC2A5	CATCACTGTTGGCATCCTTG	GCGTCTGTAGGGCTTTCTTG
HPRT1	ATGCTGAGGATTTGGAAAGG	TAATCCAGCAGGTCAGCAAA

Primers, mouse

Genes	TaqMan Assay ID/ Primer Sequence
Actb	Mm02619580_m1
Slc5a1	Mm00451203_m1
Slc5a2	Fwd: 5' d(GCGATGACCGAAGCGTAAAT) 3' Rev: 5' d(CAAGATCTCGGTGGATATGTTCTCT) 3' Pr: 5' FAM d(TTCCAGCCCAGGGCCTGTTGAA) BHQ-1 3'
Slc5a4a	Mm00446582_m1
Slc5a4b	Mm00452283_m1

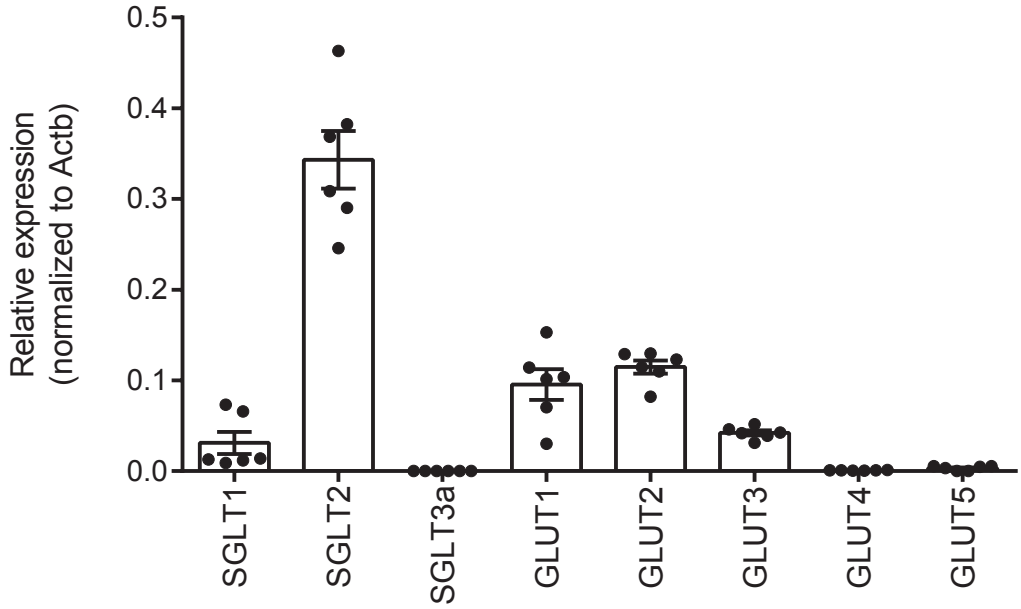
Primers pairs used for qPCR-based quantification of glucose transporters

ESM Fig.1



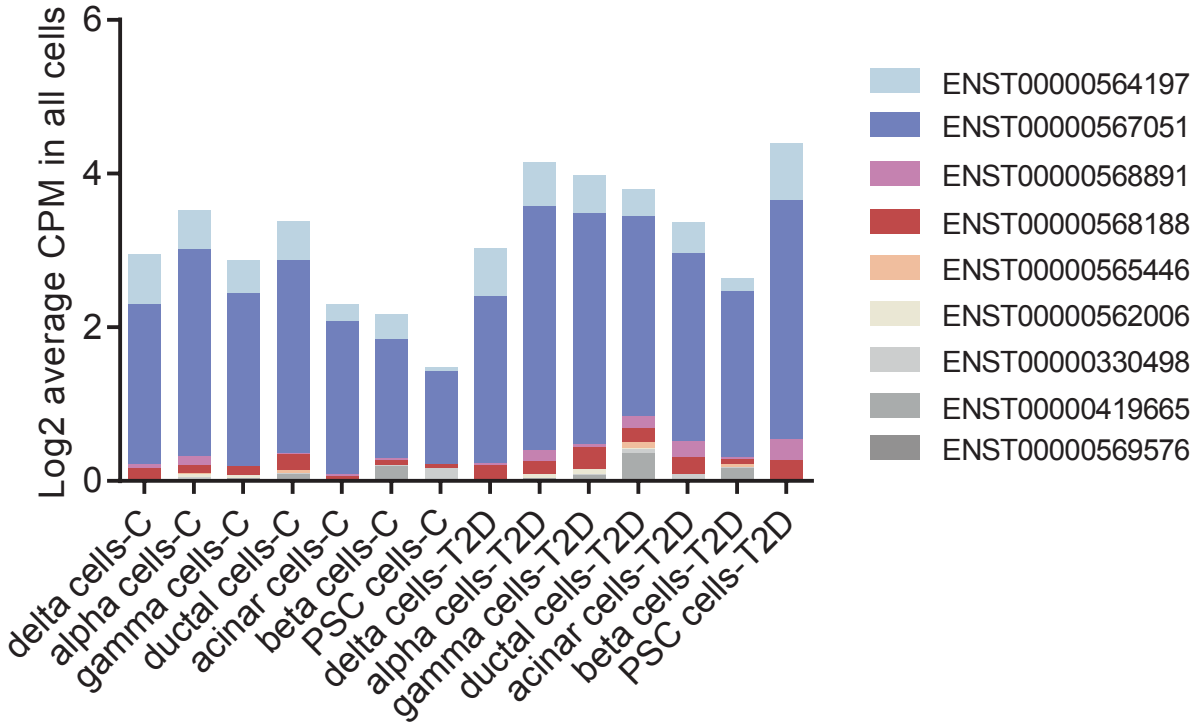
Effects of dapagliflozin on glucagon, insulin and somatostatin output from isolated perfused rat pancreas. Data are shown as means ± SEM. Glucagon (A), insulin (B) and somatostatin (C) output (fmol/min) 10 mM and 3.5 mM glucose, as indicated, and in absence or presence of dapagliflozin (500 mM, A,B) L-arginine, a known insulin and somatostatin secretagogue, was added at the end of all experiments to control for responsiveness (pos. control). *n*= 6.

ESM Fig. 2



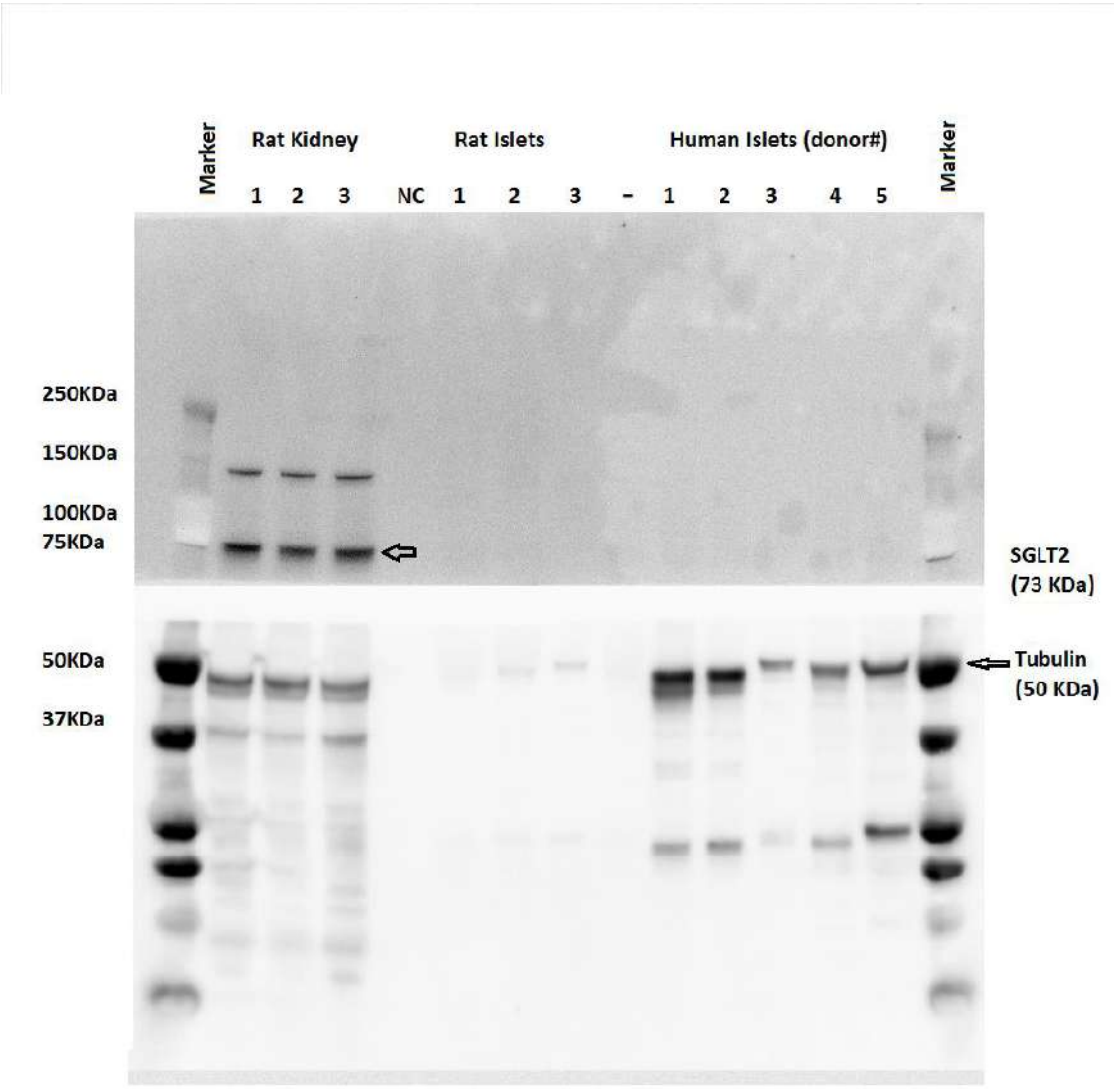
***SLC5A2* (SGLT2) expression using primer set 1.** Data are shown as mean values±SEM. Relative expression levels of SGLT1, SGLT3a and GLUT1-5 in human islets. Measurements from different individuals are indicated with dots, *n* = 5.

ESM Fig. 3



***SLC5A2* transcript expression in single cells from human islet preparations (population 1).** Expression are shown as counts per million (CPM) in indicated cells types from C: non-diabetic donors and T2: donors with type-2-diabetes. Transcript ENST00000564197 and ENST00000567051 overlap with the Slc5a2 sequence but is unrelated to the Slc5a2 gene. Transcript variant ENST00000419665 is a non-coding transcript annotated for nonsense-mediated decay, transcript variant ENS00000330498 is transcript for full-length protein-coding SGLT2.

ESM Fig. 4



Uncropped Western blot related to fig. 5 c. SGLT2 (73 KDa) and Tubulin (50 KDa; loading control) bands are indicated with black arrows.