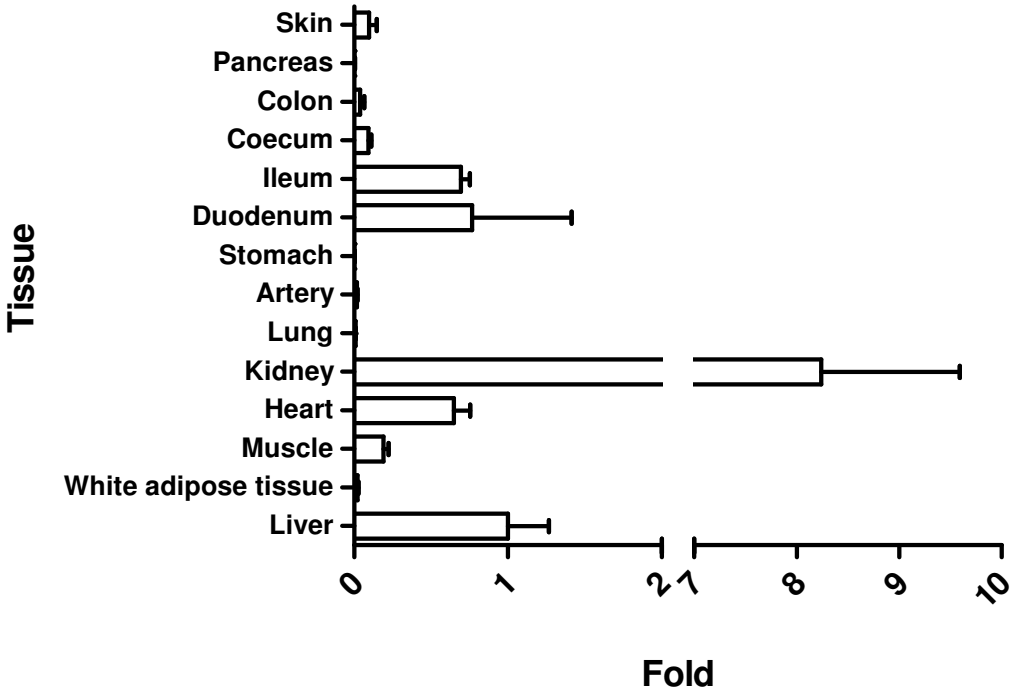
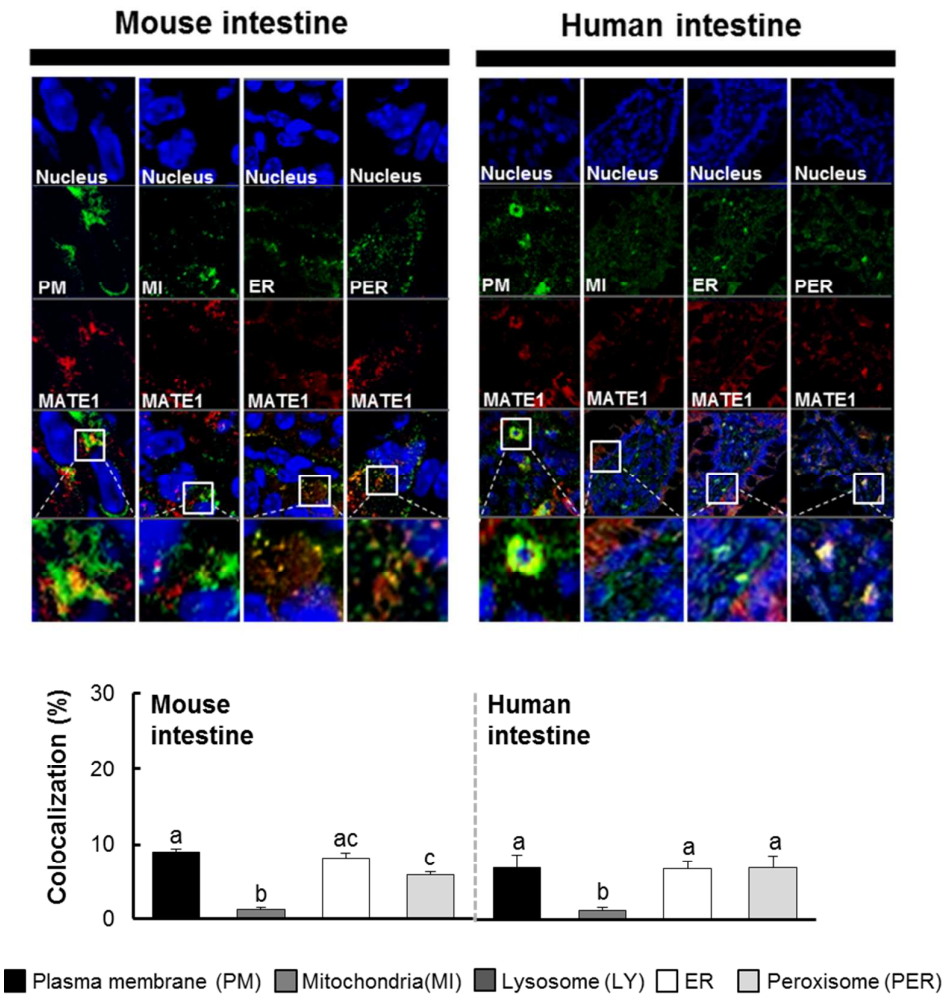
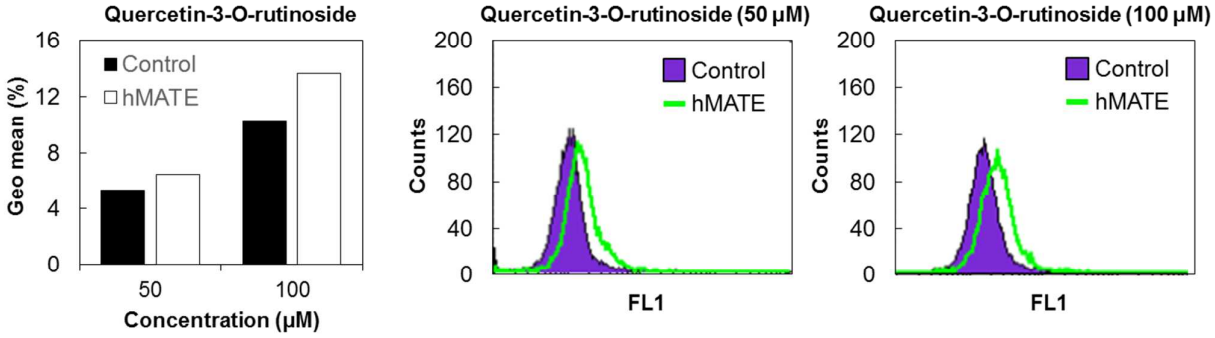
Supplementary Fig. 1. Tissue distribution of MATE1 gene expression in different mouse tissues. Each tissue was isolated from C57BL/6J mice then the MATE1 expression was assessed with qPCR. The expression levels in different tissues were normalized with the levels in the liver as a reference.



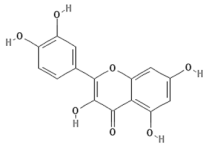
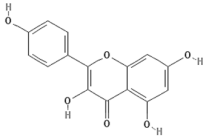
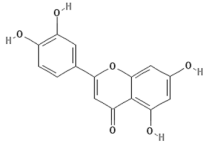
Supplementary Fig. 2. Cellular localization of MATE1 in mouse and human intestine.

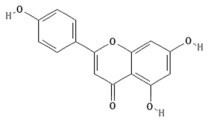
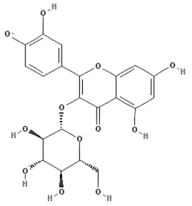
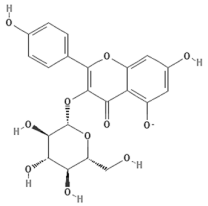
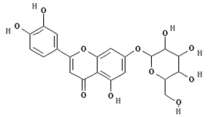


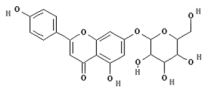
Supplementary Fig. 3. Concentration-dependent flavonoid uptake in hMATE cell. Quercetin-3-*O*-rutinoside (50 and 100 μM) was incubated with control or hMATE cell. Fluorescence labeled flavonoids in intracellular space were quantified with FACS analysis.



Supplementary table 1. Chemical properties of tested flavonoid and cellular flavonoid accumulation in hMATE1 cell.

	Structure	Molecular weight (g/mol)	H-bond donor	H-bond acceptor	LogP †	Cellular uptake, Area under curve‡ (nmol/5×10^5 cell ×min)
Quercetin		302.2	5	7	1.82	127±8[a]
Kaempferol		286.2	4	6	3.11	154±8[b]
Luteolin		286.2	4	6	3.22	74±1[c]

Apigenin		270.2	3	5	2.92	56 ± 1^{c}
Quercetin -3-*O*- glucoside		464.3	8	12	0.76	$38\pm2d^{e}$
Kaempferol -3-*O*- glucoside		448.4	7	11	NA	56 ± 2^{cd}
Luteolin -7-*O*- glucoside		448.4	7	11	NA	18 ± 0^{f}

Apigenin -7-*O*- glucoside		432.4	6	10	NA	34±4[ef]

[†] Octanol-water partition coefficient, a logarithm of ratio of the HPLC peak area of each compound in octanol to the corresponding peak in the water-based buffer. J. Agric. Food Chem. 2005, 53, 4355-4360

‡ Cellular flavonoid accumulations were quantified as described in methods during 10 min in hMATE1 cells. Data are calculated from Figure 1a. The values are the means ± SEM. Statistical significance was analyzed using a one-way ANOVA. NA, not available.