Table S1. SV-Rifampicin-SD Inputs

Parameter	Value	Method/Reference
Molecular weight (g/mol)	823	
log P	4.01	
Compound type	Ampholyte	
pKa	1.7, 7.9	
B/P	0.9	
fu	0.116	
Main plasma binding protein	Human serum albumin	
fu_{gut}	1	
$P_{eff,man}$ (10^{-4}cm/s)	2.15	Predicted
Permeability Assay	Caco-2	
Apical pH : Basolateral pH	6.4 : 7.4	
Activity	Passive & Active	
$P_{appA:B}$(10^{-6} cm/s)	50	
Reference Compound	Propranolol	
Reference Compound Value (10^{-6} cm/s)	21.15	
Scalar	1	
Distribution Model	Full PBPK Model	
V_{SS} (L/kg)	0.42	Predicted - Method 2
CL_{int} (HLM) (µL/min/mg protein)	2.84	
CL_{int} (Bile) (µL/min/10^6 cells)	0.288	
CL_R (L/h)	1.26	
Permeability limited liver model		
CL_{PD} (µL/min/10^6 cells)	1E-05	
fu_{IW}	0.043716	
fu_{EW}	1	Predicted

Transporter	SLCO1B1 (OATP1B1)	
J_{max} (pmol/min/pmol)	4	
K_m (µM)	0.5	
Enzyme	CYP2C8	
K_I (µM)	24.5	
Enzyme	CYP3A4	
K_I (µM)	15	
Transporter	ABCB1 (P-gp/MDR1)	
Organ	Gut	
K_I (µM)	23.8	
Transporter	ABCG2 (BCRP)	
Organ	Gut	
K_I (µM)	2	
Transporter	SLCO1B1 (OATP1B1)	
Organ	Liver	
K_I (µM)	0.067	
Transporter	SLCO1B3 (OATP1B3)	
Organ	Liver	
K_I (µM)	0.07	
Transporter	SLCO2B1 (OATP2B1)	
Organ	Liver	
K_I (µM)	11.4	
Transporter	ABCB1 (P-gp/MDR1)	
Organ	Liver	
K_I (µM)	23.8	
Transporter	ABCG2 (BCRP)	
Organ	Liver	
K_I (µM)	2	