

Supplement S4. Model Equations

A-particle	
$v_{createA}$	$= v_{createA} = const$
$v_{destroyA}$	$= c_{destroyA} \cdot X_i$
v_{influx}	$= v_{influx} = const$
$v_{effluxA}$	$= c_{effluxA} \cdot nC_i$
$v_{exchangeC_A}$	$= c_{exchangeC_A} \cdot nC_i \cdot CETP(0)$
$v_{exchangeT_A}$	$= c_{exchangeT_A} \cdot CETP(T)$
$v_{transferA}$	$= c_{transferA} \cdot nA_i \cdot (A_{max} - A)$
$v_{uptakeA}$	$= c_{uptakeA} \cdot A$
$v_{transferF_A}$	$= c_{transferF_A} \cdot nF_i \cdot (F_{max} - F)$
$v_{uptakeF_A}$	$= c_{uptakeF_A} \cdot F$
$v_{hydrolyzeA}$	$= c_{hydrolyzeA} \cdot nT_i$

B-particle	
$v_{createB}$	$= v_{createB} = const$
$v_{destroyB}$	$= c_{destroyB} \cdot X_i$
$v_{effluxB}$	$= c_{effluxB} \cdot nC_i$
$v_{exchangeC_B}$	$= c_{exchangeC_B} \cdot CETP(C)$
$v_{exchangeT_{B1}}$	$= c_{exchangeT_{B1}} \cdot nT_i \cdot CETP(0)$
$v_{exchangeT_{B2}}$	$= c_{exchangeT_{B2}} \cdot CETP(T)$
$v_{transferF_B}$	$= c_{transferF_B} \cdot nF_i \cdot (F_{max} - F)$
$v_{uptakeF_B}$	$= c_{uptakeF_B} \cdot F$
$v_{hydrolyzeB}$	$= c_{hydrolyzeB} \cdot nT_i$

v_μ and c_μ are rate and rate constant of reaction μ , respectively; nX_i denotes the amount of component X , $X=(A,B,F,C,T)$ in a lipoprotein complex i ; X_i is the number of lipoprotein i in the system; A_{max} , F_{max} and A , F are the maximal and actual number of free A and F in the plasma pool, respectively. $CETP(0)$ and $CETP(C)$, $CETP(T)$ denote the non-lipid bound and lipid bound (either with C or T) transport forms of the cholesteryl ester transfer protein (CETP), respectively.