SBML Model Report

Model name: “Raman2006_MycolicAcid”

May 6, 2016

1 General Overview

This is a document in SBML Level 2 Version 1 format. Table 1 gives an overview of the quantities of all components of this model.

Table 1: Number of components in this model, which are described in the following sections.

Element	Quantity	Element	Quantity
compartment types	0	compartments	1
species types	0	species	225
events	0	constraints	0
reactions	219	function definitions	0
global parameters	0	unit definitions	0
rules	0	initial assignments	0

Model Notes

Chelliah V, Li L, He E, Henry A, Stefan MI, Snoep JL, Hucka M, Le Novre N, Laibe C (2010) BioModels Database: An enhanced, curated and annotated resource for published quantitative kinetic models. BMC Syst Biol., 4:92.

2 Unit Definitions

This is an overview of five unit definitions which are all predefined by SBML and not mentioned in the model.

2.1 Unit `substance`

Notes Mole is the predefined SBML unit for `substance`.

Definition mol

2.2 Unit `volume`

Notes Litre is the predefined SBML unit for `volume`.

Definition l

2.3 Unit `area`

Notes Square metre is the predefined SBML unit for `area` since SBML Level 2 Version 1.

Definition m^2

2.4 Unit `length`

Notes Metre is the predefined SBML unit for `length` since SBML Level 2 Version 1.

Definition m

2.5 Unit `time`

Notes Second is the predefined SBML unit for `time`.

Definition s

3 Compartment

This model contains one compartment.

Table 2: Properties of all compartments.

Id	Name	SBO	Spatial Dimensions	Size	Unit	Constant	Outside
`default`			3	1	litre	☑	

3.1 Compartment `default`

This is a three dimensional compartment with a constant size given in litre.

4 Species

This model contains 225 species. Section 6 provides further details and the derived rates of change of each species.

Table 3: Properties of each species.

Id	Name	Compartment	Derived Unit	Constant	Boundary Condition
G001	acpS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X001	coenzyme-A	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X002	apo-AcpM	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X003	ADP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X004	[acyl-carrier-protein]	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G002	birA	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X005	AccB	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X006	biotin	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X007	ATP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X008	pyrophosphate	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X009	AMP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X010	BCCP-biotin	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G003	accA3	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X011	HCO3-	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X012	phosphate	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X013	BCCP-biotin-CO2	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X014	H+	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G004	accD3	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X015	acetyl-CoA	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X016	malonyl-CoA	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G005	fas	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X017	ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟

Id	Name	Compartment	Derived Unit	Constant	Boundary Condition
X018	C2-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X019	malonyl-C2-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X020	beta-keto-C4-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X021	CO2	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X022	NADPH	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X023	D-3-hydroxy-C4-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X024	NADP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X025	trans-delta-2-enoyl-C4-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X026	H2O	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X027	NADH	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X028	C4-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X029	NAD	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X030	malonyl-C4-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X031	beta-keto-C6-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X032	D-3-hydroxy-C6-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X033	trans-delta-2-enoyl-C6-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X034	C6-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X035	malonyl-C6-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X036	beta-keto-C8-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X037	D-3-hydroxy-C8-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X038	trans-delta-2-enoyl-C8-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X039	C8-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X040	malonyl-C8-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X041	beta-keto-C10-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X042	D-3-hydroxy-C10-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X043	trans-delta-2-enoyl-C10-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X044	C10-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟

Id	Name	Compartment	Derived Unit	Constant	Boundary Condition
X045	malonyl-C10-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X046	beta-keto-C12-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X047	D-3-hydroxy-C12-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X048	trans-delta-2-enoyl-C12-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X049	C12-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X050	malonyl-C12-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X051	beta-keto-C14-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X052	D-3-hydroxy-C14-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X053	trans-delta-2-enoyl-C14-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X054	C14-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X055	malonyl-C14-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X056	beta-keto-C16-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X057	D-3-hydroxy-C16-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X058	trans-delta-2-enoyl-C16-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X059	C16-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X060	malonyl-C16-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X061	beta-keto-C18-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X062	D-3-hydroxy-C18-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X063	trans-delta-2-enoyl-C18-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X064	C18-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X065	malonyl-C18-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X066	beta-keto-C20-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X067	D-3-hydroxy-C20-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X068	trans-delta-2-enoyl-C20-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X069	C20-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X070	malonyl-C20-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X071	beta-keto-C22-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟

Id	Name	Compartment	Derived Unit	Constant	Boundary Condition
X072	D-3-hydroxy-C22-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X073	trans-delta-2-enoyl-C22-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X074	C22-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X075	malonyl-C22-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X076	beta-keto-C24-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X077	D-3-hydroxy-C24-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X078	trans-delta-2-enoyl-C24-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X079	C24-acyl-ACP-FAS	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X080	C24-acyl-S-CoA	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X081	C16-acyl-S-CoA	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G006	fabD	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X082	malonyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G007	fabH	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X083	beta-keto-C18-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G008	fabG1/mabA	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X084	D-3-hydroxy-C18-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G009	fabG2	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G010	fabG4	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G011	UNK1	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X085	trans-delta-2-enoyl-C18-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G012	inhA	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X086	C18-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G013	kasA	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G014	kasB	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X087	beta-keto-C20-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X088	D-3-hydroxy-C20-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X089	trans-delta-2-enoyl-C20-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟

Id	Name	Compartment	Derived Unit	Constant	Boundary Condition
X090	C20-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X091	beta-keto-C22-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X092	D-3-hydroxy-C22-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X093	trans-delta-2-enoyl-C22-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X094	C22-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X095	beta-keto-C24-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X096	D-3-hydroxy-C24-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X097	trans-delta-2-enoyl-C24-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X098	C24-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X099	beta-keto-C26-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X100	D-3-hydroxy-C26-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X101	trans-delta-2-enoyl-C26-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X102	C26-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X103	beta-keto-C28-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X104	D-3-hydroxy-C28-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X105	trans-delta-2-enoyl-C28-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X106	C28-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X107	beta-keto-C30-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X108	D-3-hydroxy-C30-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X109	trans-delta-2-enoyl-C30-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X110	C30-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X111	beta-keto-C32-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X112	D-3-hydroxy-C32-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X113	trans-delta-2-enoyl-C32-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X114	C32-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X115	beta-keto-C34-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X116	D-3-hydroxy-C34-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟

Id	Name	Compartment	Derived Unit	Constant	Boundary Condition
X117	trans-delta-2-enoyl-C34-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X118	C34-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X119	beta-keto-C36-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X120	D-3-hydroxy-C36-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X121	trans-delta-2-enoyl-C36-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X122	C36-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X123	beta-keto-C38-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X124	D-3-hydroxy-C38-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X125	trans-delta-2-enoyl-C38-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X126	C38-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X127	beta-keto-C40-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X128	D-3-hydroxy-C40-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X129	trans-delta-2-enoyl-C40-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X130	C40-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X131	beta-keto-C42-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X132	D-3-hydroxy-C42-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X133	trans-delta-2-enoyl-C42-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X134	C42-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X135	beta-keto-C44-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X136	D-3-hydroxy-C44-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X137	trans-delta-2-enoyl-C44-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X138	C44-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X139	beta-keto-C46-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X140	D-3-hydroxy-C46-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X141	trans-delta-2-enoyl-C46-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X142	C46-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X143	beta-keto-C48-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟

Id	Name	Compartment	Derived Unit	Constant	Boundary Condition
X144	D-3-hydroxy-C48-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X145	trans-delta-2-enoyl-C48-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X146	C48-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X147	beta-keto-C50-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X148	D-3-hydroxy-C50-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X149	trans-delta-2-enoyl-C50-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X150	C50-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X151	beta-keto-C52-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X152	D-3-hydroxy-C52-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X153	trans-delta-2-enoyl-C52-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X154	C52-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X155	beta-keto-C54-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X156	D-3-hydroxy-C54-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X157	trans-delta-2-enoyl-C54-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X158	C54-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X159	beta-keto-C56-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X160	D-3-hydroxy-C56-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X161	trans-delta-2-enoyl-C56-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X162	C56-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X163	beta-keto-C58-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X164	D-3-hydroxy-C58-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X165	trans-delta-2-enoyl-C58-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X166	C58-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G015	desA1	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G016	desA2	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G017	desA3	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X167	cis-delta-2-19,31-enoyl-C52-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟

Id	Name	Compartment	Derived Unit	Constant	Boundary Condition
X168	cis-delta-2-19,37-enoyl-C54-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X169	cis-delta-2-19,37-enoyl-C58-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G018	mmaA2	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X170	S-adenosyl-L-methionine	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X171	cis-delta-1-31-enoyl-19-cp-C53-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X172	S-adenosyl-L-homocysteine	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G019	pcaA	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X173	19,31-cp-C54-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G020	fadD32	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X174	19,31-cp-C54-acyl-ACP-AMP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G021	accD4	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G022	accD5	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X175	2-carboxyl-C24-acyl-CoA	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G023	pks13	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X176	alpha-mycolate	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G024	mmaA4	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X177	cis-delta-37-methyl-hydroxy-C55-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G025	mmaA3	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X178	cis-delta-37-methyl-hydroxymethyl-C56-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X179	cis-methoxy-C57-meroacyl-cp-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G026	cmaA2	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X180	cis-methoxy-C57-meroacyl-cp-ACP-AMP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X181	cis-methoxy-mycolate	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟

Id	Name	Compartment	Derived Unit	Constant	Boundary Condition
G027	mmaA1	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X182	delta-2-cis-19,trans-37-enoyl-methyl-C55-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X183	trans-delta-37-methyl-hydroxy-C56-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X184	trans-delta-37-methyl-hydroxymethyl-C57-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X185	trans-methoxy-C58-meroacyl-cp-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X186	trans-methoxy-C58-meroacyl-cp-ACP-AMP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X187	trans-methoxy-mycolate	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X188	cis-delta-37-methyl-hydroxy-C59-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
G028	UNK2	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X189	cis-delta-37-methyl-keto-C59-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X190	cis-keto-C60-meroacyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X191	cis-keto-C60-meroacyl-ACP-AMP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X192	cis-keto-mycolate	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X193	trans-delta-37-methyl-hydroxy-C60-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X194	trans-delta-37-methyl-keto-C60-acyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X195	trans-keto-C61-meroacyl-ACP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X196	trans-keto-C61-meroacyl-ACP-AMP	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟
X197	trans-keto-mycolate	default	$\mathrm{mol} \cdot \mathrm{l}^{-1}$	⊟	⊟

5 Reactions

This model contains 219 reactions. All reactions are listed in the following table and are subsequently described in detail. If a reaction is affected by a modifier, the identifier of this species is written above the reaction arrow.

Table 4: Overview of all reactions

№	Id	Name	Reaction Equation	SBO
1	J001		$X001 + X002 \xrightarrow{G001} X003 + X004$	
2	J002		$X005 + X006 + X007 \xrightarrow{G002} X008 + X009 + X010$	
3	J003		$X007 + X010 + X011 \xrightarrow{G003} X003 + X012 + X013 + X014$	
4	J004		$X013 + X015 \xrightarrow{G004} X016 + X010$	
5	J005		$X015 + X017 \xrightarrow{G005} X018 + X001$	
6	J006		$X018 + X016 \xrightarrow{G005} X019 + X001$	
7	J007		$X019 \xrightarrow{G005} X020 + X021$	
8	J008		$X022 + X020 \xrightarrow{G005} X023 + X024$	
9	J009		$X023 \xrightarrow{G005} X025 + X026$	
10	J010		$X027 + X025 \xrightarrow{G005} X028 + X029$	
11	J011		$X028 + X016 \xrightarrow{G005} X030 + X001$	
12	J012		$X030 \xrightarrow{G005} X031 + X021$	
13	J013		$X022 + X031 \xrightarrow{G005} X032 + X024$	
14	J014		$X032 \xrightarrow{G005} X033 + X026$	
15	J015		$X027 + X033 \xrightarrow{G005} X034 + X029$	
16	J016		$X034 + X016 \xrightarrow{G005} X035 + X001$	

№	Id	Name	Reaction Equation	SBO
17	J017		$\mathrm{X035} \xrightarrow{\mathrm{G005}} \mathrm{X036} + \mathrm{X021}$	
18	J018		$\mathrm{X022} + \mathrm{X036} \xrightarrow{\mathrm{G005}} \mathrm{X037} + \mathrm{X024}$	
19	J019		$\mathrm{X037} \xrightarrow{\mathrm{G005}} \mathrm{X038} + \mathrm{X026}$	
20	J020		$\mathrm{X027} + \mathrm{X038} \xrightarrow{\mathrm{G005}} \mathrm{X039} + \mathrm{X029}$	
21	J021		$\mathrm{X039} + \mathrm{X016} \xrightarrow{\mathrm{G005}} \mathrm{X040} + \mathrm{X001}$	
22	J022		$\mathrm{X040} \xrightarrow{\mathrm{G005}} \mathrm{X041} + \mathrm{X021}$	
23	J023		$\mathrm{X022} + \mathrm{X041} \xrightarrow{\mathrm{G005}} \mathrm{X042} + \mathrm{X024}$	
24	J024		$\mathrm{X042} \xrightarrow{\mathrm{G005}} \mathrm{X043} + \mathrm{X026}$	
25	J025		$\mathrm{X027} + \mathrm{X043} \xrightarrow{\mathrm{G005}} \mathrm{X044} + \mathrm{X029}$	
26	J026		$\mathrm{X044} + \mathrm{X016} \xrightarrow{\mathrm{G005}} \mathrm{X045} + \mathrm{X001}$	
27	J027		$\mathrm{X045} \xrightarrow{\mathrm{G005}} \mathrm{X046} + \mathrm{X021}$	
28	J028		$\mathrm{X022} + \mathrm{X046} \xrightarrow{\mathrm{G005}} \mathrm{X047} + \mathrm{X024}$	
29	J029		$\mathrm{X047} \xrightarrow{\mathrm{G005}} \mathrm{X048} + \mathrm{X026}$	
30	J030		$\mathrm{X027} + \mathrm{X048} \xrightarrow{\mathrm{G005}} \mathrm{X049} + \mathrm{X029}$	
31	J031		$\mathrm{X049} + \mathrm{X016} \xrightarrow{\mathrm{G005}} \mathrm{X050} + \mathrm{X001}$	
32	J032		$\mathrm{X050} \xrightarrow{\mathrm{G005}} \mathrm{X051} + \mathrm{X021}$	
33	J033		$\mathrm{X022} + \mathrm{X051} \xrightarrow{\mathrm{G005}} \mathrm{X052} + \mathrm{X024}$	
34	J034		$\mathrm{X052} \xrightarrow{\mathrm{G005}} \mathrm{X053} + \mathrm{X026}$	
35	J035		$\mathrm{X027} + \mathrm{X053} \xrightarrow{\mathrm{G005}} \mathrm{X054} + \mathrm{X029}$	
36	J036		$\mathrm{X054} + \mathrm{X016} \xrightarrow{\mathrm{G005}} \mathrm{X055} + \mathrm{X001}$	
37	J037		$\mathrm{X055} \xrightarrow{\mathrm{G005}} \mathrm{X056} + \mathrm{X021}$	

№	Id	Name	Reaction Equation	SBO
38	J038		$\mathrm{X022} + \mathrm{X056} \xrightarrow{\mathrm{G005}} \mathrm{X057} + \mathrm{X024}$	
39	J039		$\mathrm{X057} \xrightarrow{\mathrm{G005}} \mathrm{X058} + \mathrm{X026}$	
40	J040		$\mathrm{X027} + \mathrm{X058} \xrightarrow{\mathrm{G005}} \mathrm{X059} + \mathrm{X029}$	
41	J041		$\mathrm{X059} + \mathrm{X016} \xrightarrow{\mathrm{G005}} \mathrm{X060} + \mathrm{X001}$	
42	J042		$\mathrm{X060} \xrightarrow{\mathrm{G005}} \mathrm{X061} + \mathrm{X021}$	
43	J043		$\mathrm{X022} + \mathrm{X061} \xrightarrow{\mathrm{G005}} \mathrm{X062} + \mathrm{X024}$	
44	J044		$\mathrm{X062} \xrightarrow{\mathrm{G005}} \mathrm{X063} + \mathrm{X026}$	
45	J045		$\mathrm{X027} + \mathrm{X063} \xrightarrow{\mathrm{G005}} \mathrm{X064} + \mathrm{X029}$	
46	J046		$\mathrm{X064} + \mathrm{X016} \xrightarrow{\mathrm{G005}} \mathrm{X065} + \mathrm{X001}$	
47	J047		$\mathrm{X065} \xrightarrow{\mathrm{G005}} \mathrm{X066} + \mathrm{X021}$	
48	J048		$\mathrm{X022} + \mathrm{X066} \xrightarrow{\mathrm{G005}} \mathrm{X067} + \mathrm{X024}$	
49	J049		$\mathrm{X067} \xrightarrow{\mathrm{G005}} \mathrm{X068} + \mathrm{X026}$	
50	J050		$\mathrm{X027} + \mathrm{X068} \xrightarrow{\mathrm{G005}} \mathrm{X069} + \mathrm{X029}$	
51	J051		$\mathrm{X069} + \mathrm{X016} \xrightarrow{\mathrm{G005}} \mathrm{X070} + \mathrm{X001}$	
52	J052		$\mathrm{X070} \xrightarrow{\mathrm{G005}} \mathrm{X071} + \mathrm{X021}$	
53	J053		$\mathrm{X022} + \mathrm{X071} \xrightarrow{\mathrm{G005}} \mathrm{X072} + \mathrm{X024}$	
54	J054		$\mathrm{X072} \xrightarrow{\mathrm{G005}} \mathrm{X073} + \mathrm{X026}$	
55	J055		$\mathrm{X027} + \mathrm{X073} \xrightarrow{\mathrm{G005}} \mathrm{X074} + \mathrm{X029}$	
56	J056		$\mathrm{X074} + \mathrm{X016} \xrightarrow{\mathrm{G005}} \mathrm{X075} + \mathrm{X001}$	
57	J057		$\mathrm{X075} \xrightarrow{\mathrm{G005}} \mathrm{X076} + \mathrm{X021}$	
58	J058		$\mathrm{X022} + \mathrm{X076} \xrightarrow{\mathrm{G005}} \mathrm{X077} + \mathrm{X024}$	

№	Id	Name	Reaction Equation	SBO
59	J059		$\mathrm{X077} \xrightarrow{\mathrm{G005}} \mathrm{X078} + \mathrm{X026}$	
60	J060		$\mathrm{X027} + \mathrm{X078} \xrightarrow{\mathrm{G005}} \mathrm{X079} + \mathrm{X029}$	
61	J061		$\mathrm{X079} + \mathrm{X001} \xrightarrow{\mathrm{G005}} \mathrm{X080} + \mathrm{X017}$	
62	J062		$\mathrm{X059} + \mathrm{X001} \xrightarrow{\mathrm{G005}} \mathrm{X081} + \mathrm{X017}$	
63	J063		$\mathrm{X004} + \mathrm{X016} \xrightarrow{\mathrm{G006}} \mathrm{X082} + \mathrm{X001}$	
64	J064		$\mathrm{X081} + \mathrm{X082} \xrightarrow{\mathrm{G007}} \mathrm{X001} + \mathrm{X083} + \mathrm{X021}$	
65	J065		$\mathrm{X022} + \mathrm{X083} \xrightarrow{\mathrm{G008}} \mathrm{X084} + \mathrm{X024}$	
66	J066		$\mathrm{X022} + \mathrm{X083} \xrightarrow{\mathrm{G009}} \mathrm{X084} + \mathrm{X024}$	
67	J067		$\mathrm{X022} + \mathrm{X083} \xrightarrow{\mathrm{G010}} \mathrm{X084} + \mathrm{X024}$	
68	J068		$\mathrm{X084} \xrightarrow{\mathrm{G011}} \mathrm{X085} + \mathrm{X026}$	
69	J069		$\mathrm{X027} + \mathrm{X085} \xrightarrow{\mathrm{G012}} \mathrm{X086} + \mathrm{X029}$	
70	J070		$\mathrm{X086} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X087} + \mathrm{X021}$	
71	J071		$\mathrm{X022} + \mathrm{X087} \xrightarrow{\mathrm{G008}} \mathrm{X088} + \mathrm{X024}$	
72	J072		$\mathrm{X022} + \mathrm{X087} \xrightarrow{\mathrm{G009}} \mathrm{X088} + \mathrm{X024}$	
73	J073		$\mathrm{X022} + \mathrm{X087} \xrightarrow{\mathrm{G010}} \mathrm{X088} + \mathrm{X024}$	
74	J074		$\mathrm{X088} \xrightarrow{\mathrm{G011}} \mathrm{X089} + \mathrm{X026}$	
75	J075		$\mathrm{X027} + \mathrm{X089} \xrightarrow{\mathrm{G012}} \mathrm{X090} + \mathrm{X029}$	
76	J076		$\mathrm{X090} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X091} + \mathrm{X021}$	
77	J077		$\mathrm{X022} + \mathrm{X091} \xrightarrow{\mathrm{G008}} \mathrm{X092} + \mathrm{X024}$	
78	J078		$\mathrm{X022} + \mathrm{X091} \xrightarrow{\mathrm{G009}} \mathrm{X092} + \mathrm{X024}$	
79	J079		$\mathrm{X022} + \mathrm{X091} \xrightarrow{\mathrm{G010}} \mathrm{X092} + \mathrm{X024}$	

№	Id	Name	Reaction Equation	SBO
80	J080		$\mathrm{X092} \xrightarrow{\mathrm{G011}} \mathrm{X093} + \mathrm{X026}$	
81	J081		$\mathrm{X027} + \mathrm{X093} \xrightarrow{\mathrm{G012}} \mathrm{X094} + \mathrm{X029}$	
82	J082		$\mathrm{X094} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X095} + \mathrm{X021}$	
83	J083		$\mathrm{X022} + \mathrm{X095} \xrightarrow{\mathrm{G008}} \mathrm{X096} + \mathrm{X024}$	
84	J084		$\mathrm{X022} + \mathrm{X095} \xrightarrow{\mathrm{G009}} \mathrm{X096} + \mathrm{X024}$	
85	J085		$\mathrm{X022} + \mathrm{X095} \xrightarrow{\mathrm{G010}} \mathrm{X096} + \mathrm{X024}$	
86	J086		$\mathrm{X096} \xrightarrow{\mathrm{G011}} \mathrm{X097} + \mathrm{X026}$	
87	J087		$\mathrm{X027} + \mathrm{X097} \xrightarrow{\mathrm{G012}} \mathrm{X098} + \mathrm{X029}$	
88	J088		$\mathrm{X098} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X099} + \mathrm{X021}$	
89	J089		$\mathrm{X022} + \mathrm{X099} \xrightarrow{\mathrm{G008}} \mathrm{X100} + \mathrm{X024}$	
90	J090		$\mathrm{X022} + \mathrm{X099} \xrightarrow{\mathrm{G009}} \mathrm{X100} + \mathrm{X024}$	
91	J091		$\mathrm{X022} + \mathrm{X099} \xrightarrow{\mathrm{G010}} \mathrm{X100} + \mathrm{X024}$	
92	J092		$\mathrm{X100} \xrightarrow{\mathrm{G011}} \mathrm{X101} + \mathrm{X026}$	
93	J093		$\mathrm{X027} + \mathrm{X101} \xrightarrow{\mathrm{G012}} \mathrm{X102} + \mathrm{X029}$	
94	J094		$\mathrm{X102} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X103} + \mathrm{X021}$	
95	J095		$\mathrm{X022} + \mathrm{X103} \xrightarrow{\mathrm{G008}} \mathrm{X104} + \mathrm{X024}$	
96	J096		$\mathrm{X022} + \mathrm{X103} \xrightarrow{\mathrm{G009}} \mathrm{X104} + \mathrm{X024}$	
97	J097		$\mathrm{X022} + \mathrm{X103} \xrightarrow{\mathrm{G010}} \mathrm{X104} + \mathrm{X024}$	
98	J098		$\mathrm{X104} \xrightarrow{\mathrm{G011}} \mathrm{X105} + \mathrm{X026}$	
99	J099		$\mathrm{X027} + \mathrm{X105} \xrightarrow{\mathrm{G012}} \mathrm{X106} + \mathrm{X029}$	
100	J100		$\mathrm{X106} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X107} + \mathrm{X021}$	

№	Id	Name	Reaction Equation	SBO
101	J101		$\mathrm{X022} + \mathrm{X107} \xrightarrow{\mathrm{G008}} \mathrm{X108} + \mathrm{X024}$	
102	J102		$\mathrm{X022} + \mathrm{X107} \xrightarrow{\mathrm{G009}} \mathrm{X108} + \mathrm{X024}$	
103	J103		$\mathrm{X022} + \mathrm{X107} \xrightarrow{\mathrm{G010}} \mathrm{X108} + \mathrm{X024}$	
104	J104		$\mathrm{X108} \xrightarrow{\mathrm{G011}} \mathrm{X109} + \mathrm{X026}$	
105	J105		$\mathrm{X027} + \mathrm{X109} \xrightarrow{\mathrm{G012}} \mathrm{X110} + \mathrm{X029}$	
106	J106		$\mathrm{X110} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X111} + \mathrm{X021}$	
107	J107		$\mathrm{X022} + \mathrm{X111} \xrightarrow{\mathrm{G008}} \mathrm{X112} + \mathrm{X024}$	
108	J108		$\mathrm{X022} + \mathrm{X111} \xrightarrow{\mathrm{G009}} \mathrm{X112} + \mathrm{X024}$	
109	J109		$\mathrm{X022} + \mathrm{X111} \xrightarrow{\mathrm{G010}} \mathrm{X112} + \mathrm{X024}$	
110	J110		$\mathrm{X112} \xrightarrow{\mathrm{G011}} \mathrm{X113} + \mathrm{X026}$	
111	J111		$\mathrm{X027} + \mathrm{X113} \xrightarrow{\mathrm{G012}} \mathrm{X114} + \mathrm{X029}$	
112	J112		$\mathrm{X114} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X115} + \mathrm{X021}$	
113	J113		$\mathrm{X022} + \mathrm{X115} \xrightarrow{\mathrm{G008}} \mathrm{X116} + \mathrm{X024}$	
114	J114		$\mathrm{X022} + \mathrm{X115} \xrightarrow{\mathrm{G009}} \mathrm{X116} + \mathrm{X024}$	
115	J115		$\mathrm{X022} + \mathrm{X115} \xrightarrow{\mathrm{G010}} \mathrm{X116} + \mathrm{X024}$	
116	J116		$\mathrm{X116} \xrightarrow{\mathrm{G011}} \mathrm{X117} + \mathrm{X026}$	
117	J117		$\mathrm{X027} + \mathrm{X117} \xrightarrow{\mathrm{G012}} \mathrm{X118} + \mathrm{X029}$	
118	J118		$\mathrm{X118} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X119} + \mathrm{X021}$	
119	J119		$\mathrm{X022} + \mathrm{X119} \xrightarrow{\mathrm{G008}} \mathrm{X120} + \mathrm{X024}$	
120	J120		$\mathrm{X022} + \mathrm{X119} \xrightarrow{\mathrm{G009}} \mathrm{X120} + \mathrm{X024}$	
121	J121		$\mathrm{X022} + \mathrm{X119} \xrightarrow{\mathrm{G010}} \mathrm{X120} + \mathrm{X024}$	

№	Id	Name	Reaction Equation	SBO
122	J122		$\mathrm{X120} \xrightarrow{\mathrm{G011}} \mathrm{X121} + \mathrm{X026}$	
123	J123		$\mathrm{X027} + \mathrm{X121} \xrightarrow{\mathrm{G012}} \mathrm{X122} + \mathrm{X029}$	
124	J124		$\mathrm{X122} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X123} + \mathrm{X021}$	
125	J125		$\mathrm{X022} + \mathrm{X123} \xrightarrow{\mathrm{G008}} \mathrm{X124} + \mathrm{X024}$	
126	J126		$\mathrm{X022} + \mathrm{X123} \xrightarrow{\mathrm{G009}} \mathrm{X124} + \mathrm{X024}$	
127	J127		$\mathrm{X022} + \mathrm{X123} \xrightarrow{\mathrm{G010}} \mathrm{X124} + \mathrm{X024}$	
128	J128		$\mathrm{X124} \xrightarrow{\mathrm{G011}} \mathrm{X125} + \mathrm{X026}$	
129	J129		$\mathrm{X027} + \mathrm{X125} \xrightarrow{\mathrm{G012}} \mathrm{X126} + \mathrm{X029}$	
130	J130		$\mathrm{X126} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X127} + \mathrm{X021}$	
131	J131		$\mathrm{X022} + \mathrm{X127} \xrightarrow{\mathrm{G008}} \mathrm{X128} + \mathrm{X024}$	
132	J132		$\mathrm{X022} + \mathrm{X127} \xrightarrow{\mathrm{G009}} \mathrm{X128} + \mathrm{X024}$	
133	J133		$\mathrm{X022} + \mathrm{X127} \xrightarrow{\mathrm{G010}} \mathrm{X128} + \mathrm{X024}$	
134	J134		$\mathrm{X128} \xrightarrow{\mathrm{G011}} \mathrm{X129} + \mathrm{X026}$	
135	J135		$\mathrm{X027} + \mathrm{X129} \xrightarrow{\mathrm{G012}} \mathrm{X130} + \mathrm{X029}$	
136	J136		$\mathrm{X130} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X131} + \mathrm{X021}$	
137	J137		$\mathrm{X022} + \mathrm{X131} \xrightarrow{\mathrm{G008}} \mathrm{X132} + \mathrm{X024}$	
138	J138		$\mathrm{X022} + \mathrm{X131} \xrightarrow{\mathrm{G009}} \mathrm{X132} + \mathrm{X024}$	
139	J139		$\mathrm{X022} + \mathrm{X131} \xrightarrow{\mathrm{G010}} \mathrm{X132} + \mathrm{X024}$	
140	J140		$\mathrm{X132} \xrightarrow{\mathrm{G011}} \mathrm{X133} + \mathrm{X026}$	
141	J141		$\mathrm{X027} + \mathrm{X133} \xrightarrow{\mathrm{G012}} \mathrm{X134} + \mathrm{X029}$	
142	J142		$\mathrm{X134} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X135} + \mathrm{X021}$	

№	Id	Name	Reaction Equation	SBO
143	J143		$\mathrm{X022} + \mathrm{X135} \xrightarrow{\mathrm{G008}} \mathrm{X136} + \mathrm{X024}$	
144	J144		$\mathrm{X022} + \mathrm{X135} \xrightarrow{\mathrm{G009}} \mathrm{X136} + \mathrm{X024}$	
145	J145		$\mathrm{X022} + \mathrm{X135} \xrightarrow{\mathrm{G010}} \mathrm{X136} + \mathrm{X024}$	
146	J146		$\mathrm{X136} \xrightarrow{\mathrm{G011}} \mathrm{X137} + \mathrm{X026}$	
147	J147		$\mathrm{X027} + \mathrm{X137} \xrightarrow{\mathrm{G012}} \mathrm{X138} + \mathrm{X029}$	
148	J148		$\mathrm{X138} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X139} + \mathrm{X021}$	
149	J149		$\mathrm{X022} + \mathrm{X139} \xrightarrow{\mathrm{G008}} \mathrm{X140} + \mathrm{X024}$	
150	J150		$\mathrm{X022} + \mathrm{X139} \xrightarrow{\mathrm{G009}} \mathrm{X140} + \mathrm{X024}$	
151	J151		$\mathrm{X022} + \mathrm{X139} \xrightarrow{\mathrm{G010}} \mathrm{X140} + \mathrm{X024}$	
152	J152		$\mathrm{X140} \xrightarrow{\mathrm{G011}} \mathrm{X141} + \mathrm{X026}$	
153	J153		$\mathrm{X027} + \mathrm{X141} \xrightarrow{\mathrm{G012}} \mathrm{X142} + \mathrm{X029}$	
154	J154		$\mathrm{X142} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X143} + \mathrm{X021}$	
155	J155		$\mathrm{X022} + \mathrm{X143} \xrightarrow{\mathrm{G008}} \mathrm{X144} + \mathrm{X024}$	
156	J156		$\mathrm{X022} + \mathrm{X143} \xrightarrow{\mathrm{G009}} \mathrm{X144} + \mathrm{X024}$	
157	J157		$\mathrm{X022} + \mathrm{X143} \xrightarrow{\mathrm{G010}} \mathrm{X144} + \mathrm{X024}$	
158	J158		$\mathrm{X144} \xrightarrow{\mathrm{G011}} \mathrm{X145} + \mathrm{X026}$	
159	J159		$\mathrm{X027} + \mathrm{X145} \xrightarrow{\mathrm{G012}} \mathrm{X146} + \mathrm{X029}$	
160	J160		$\mathrm{X146} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X147} + \mathrm{X021}$	
161	J161		$\mathrm{X022} + \mathrm{X147} \xrightarrow{\mathrm{G008}} \mathrm{X148} + \mathrm{X024}$	
162	J162		$\mathrm{X022} + \mathrm{X147} \xrightarrow{\mathrm{G009}} \mathrm{X148} + \mathrm{X024}$	
163	J163		$\mathrm{X022} + \mathrm{X147} \xrightarrow{\mathrm{G010}} \mathrm{X148} + \mathrm{X024}$	

№	Id	Name	Reaction Equation	SBO
164	J164		$\mathrm{X148} \xrightarrow{\mathrm{G011}} \mathrm{X149} + \mathrm{X026}$	
165	J165		$\mathrm{X027} + \mathrm{X149} \xrightarrow{\mathrm{G012}} \mathrm{X150} + \mathrm{X029}$	
166	J166		$\mathrm{X150} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X151} + \mathrm{X021}$	
167	J167		$\mathrm{X022} + \mathrm{X151} \xrightarrow{\mathrm{G008}} \mathrm{X152} + \mathrm{X024}$	
168	J168		$\mathrm{X022} + \mathrm{X151} \xrightarrow{\mathrm{G009}} \mathrm{X152} + \mathrm{X024}$	
169	J169		$\mathrm{X022} + \mathrm{X151} \xrightarrow{\mathrm{G010}} \mathrm{X152} + \mathrm{X024}$	
170	J170		$\mathrm{X152} \xrightarrow{\mathrm{G011}} \mathrm{X153} + \mathrm{X026}$	
171	J171		$\mathrm{X027} + \mathrm{X153} \xrightarrow{\mathrm{G012}} \mathrm{X154} + \mathrm{X029}$	
172	J172		$\mathrm{X154} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X155} + \mathrm{X021}$	
173	J173		$\mathrm{X022} + \mathrm{X155} \xrightarrow{\mathrm{G008}} \mathrm{X156} + \mathrm{X024}$	
174	J174		$\mathrm{X022} + \mathrm{X155} \xrightarrow{\mathrm{G009}} \mathrm{X156} + \mathrm{X024}$	
175	J175		$\mathrm{X022} + \mathrm{X155} \xrightarrow{\mathrm{G010}} \mathrm{X156} + \mathrm{X024}$	
176	J176		$\mathrm{X156} \xrightarrow{\mathrm{G011}} \mathrm{X157} + \mathrm{X026}$	
177	J177		$\mathrm{X027} + \mathrm{X157} \xrightarrow{\mathrm{G012}} \mathrm{X158} + \mathrm{X029}$	
178	J178		$\mathrm{X158} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X159} + \mathrm{X021}$	
179	J179		$\mathrm{X022} + \mathrm{X159} \xrightarrow{\mathrm{G008}} \mathrm{X160} + \mathrm{X024}$	
180	J180		$\mathrm{X022} + \mathrm{X159} \xrightarrow{\mathrm{G009}} \mathrm{X160} + \mathrm{X024}$	
181	J181		$\mathrm{X022} + \mathrm{X159} \xrightarrow{\mathrm{G010}} \mathrm{X160} + \mathrm{X024}$	
182	J182		$\mathrm{X160} \xrightarrow{\mathrm{G011}} \mathrm{X161} + \mathrm{X026}$	
183	J183		$\mathrm{X027} + \mathrm{X161} \xrightarrow{\mathrm{G012}} \mathrm{X162} + \mathrm{X029}$	
184	J184		$\mathrm{X162} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X163} + \mathrm{X021}$	

№	Id	Name	Reaction Equation	SBO
185	J185		$\mathrm{X022} + \mathrm{X163} \xrightarrow{\mathrm{G008}} \mathrm{X164} + \mathrm{X024}$	
186	J186		$\mathrm{X022} + \mathrm{X163} \xrightarrow{\mathrm{G009}} \mathrm{X164} + \mathrm{X024}$	
187	J187		$\mathrm{X022} + \mathrm{X163} \xrightarrow{\mathrm{G010}} \mathrm{X164} + \mathrm{X024}$	
188	J188		$\mathrm{X164} \xrightarrow{\mathrm{G011}} \mathrm{X165} + \mathrm{X026}$	
189	J189		$\mathrm{X027} + \mathrm{X165} \xrightarrow{\mathrm{G012}} \mathrm{X166} + \mathrm{X029}$	
190	J190		$\mathrm{X154} + \mathrm{X024} \xrightarrow{\mathrm{G015,\ G016,\ G017}} \mathrm{X167} + \mathrm{X022}$	
191	J191		$\mathrm{X158} + \mathrm{X024} \xrightarrow{\mathrm{G015,\ G016,\ G017}} \mathrm{X168} + \mathrm{X022}$	
192	J192		$\mathrm{X166} + \mathrm{X024} \xrightarrow{\mathrm{G015,\ G016,\ G017}} \mathrm{X169} + \mathrm{X022}$	
193	J193		$\mathrm{X167} + \mathrm{X170} \xrightarrow{\mathrm{G018}} \mathrm{X171} + \mathrm{X172}$	
194	J194		$\mathrm{X171} + \mathrm{X170} \xrightarrow{\mathrm{G019}} \mathrm{X173} + \mathrm{X172}$	
195	J195		$\mathrm{X173} + \mathrm{X007} \xrightarrow{\mathrm{G020}} \mathrm{X174} + \mathrm{X008}$	
196	J196		$\mathrm{X080} + \mathrm{X021} \xrightarrow{\mathrm{G021,\ G022,\ G003}} \mathrm{X175}$	
197	J197		$\mathrm{X174} + \mathrm{X175} \xrightarrow{\mathrm{G023}} \mathrm{X176} + \mathrm{X009} + \mathrm{X001} + \mathrm{X004}$	
198	J198		$\mathrm{X168} + \mathrm{X170} \xrightarrow{\mathrm{G024}} \mathrm{X177} + \mathrm{X172}$	
199	J199		$\mathrm{X177} + \mathrm{X170} \xrightarrow{\mathrm{G025}} \mathrm{X178} + \mathrm{X172}$	
200	J200		$\mathrm{X178} + \mathrm{X170} \xrightarrow{\mathrm{G018}} \mathrm{X179} + \mathrm{X172}$	
201	J201		$\mathrm{X178} + \mathrm{X170} \xrightarrow{\mathrm{G026}} \mathrm{X179} + \mathrm{X172}$	
202	J202		$\mathrm{X179} + \mathrm{X007} \xrightarrow{\mathrm{G020}} \mathrm{X180} + \mathrm{X008}$	
203	J203		$\mathrm{X180} + \mathrm{X175} \xrightarrow{\mathrm{G023}} \mathrm{X181} + \mathrm{X009} + \mathrm{X001} + \mathrm{X004}$	
204	J204		$\mathrm{X168} + \mathrm{X170} \xrightarrow{\mathrm{G027}} \mathrm{X182} + \mathrm{X172}$	
205	J205		$\mathrm{X182} + \mathrm{X170} \xrightarrow{\mathrm{G024}} \mathrm{X183} + \mathrm{X172}$	

№	Id	Name	Reaction Equation	SBO
206	J206		$\mathrm{X183} + \mathrm{X170} \xrightarrow{\mathrm{G025}} \mathrm{X184} + \mathrm{X172}$	
207	J207		$\mathrm{X184} + \mathrm{X170} \xrightarrow{\mathrm{G026}} \mathrm{X185} + \mathrm{X172}$	
208	J208		$\mathrm{X185} + \mathrm{X007} \xrightarrow{\mathrm{G020}} \mathrm{X186} + \mathrm{X008}$	
209	J209		$\mathrm{X186} + \mathrm{X175} \xrightarrow{\mathrm{G023}} \mathrm{X187} + \mathrm{X009} + \mathrm{X001} + \mathrm{X004}$	
210	J210		$\mathrm{X169} + \mathrm{X170} \xrightarrow{\mathrm{G024}} \mathrm{X188} + \mathrm{X172}$	
211	J211		$\mathrm{X188} + \mathrm{X024} \xrightarrow{\mathrm{G028}} \mathrm{X189} + \mathrm{X022}$	
212	J212		$\mathrm{X189} + \mathrm{X170} \xrightarrow{\mathrm{G018}} \mathrm{X190} + \mathrm{X172}$	
213	J213		$\mathrm{X190} + \mathrm{X007} \xrightarrow{\mathrm{G020}} \mathrm{X191} + \mathrm{X008}$	
214	J214		$\mathrm{X191} + \mathrm{X175} \xrightarrow{\mathrm{G023}} \mathrm{X192} + \mathrm{X009} + \mathrm{X001} + \mathrm{X004}$	
215	J215		$\mathrm{X188} + \mathrm{X170} \xrightarrow{\mathrm{G027}} \mathrm{X193} + \mathrm{X172}$	
216	J216		$\mathrm{X193} + \mathrm{X024} \xrightarrow{\mathrm{G028}} \mathrm{X194} + \mathrm{X022}$	
217	J217		$\mathrm{X194} + \mathrm{X170} \xrightarrow{\mathrm{G026}} \mathrm{X195} + \mathrm{X172}$	
218	J218		$\mathrm{X195} + \mathrm{X007} \xrightarrow{\mathrm{G020}} \mathrm{X196} + \mathrm{X008}$	
219	J219		$\mathrm{X196} + \mathrm{X175} \xrightarrow{\mathrm{G023}} \mathrm{X197} + \mathrm{X009} + \mathrm{X001} + \mathrm{X004}$	

5.1 Reaction J001

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X001} + \mathrm{X002} \xrightarrow{\mathrm{G001}} \mathrm{X003} + \mathrm{X004} \tag{1}$$

Reactants

Table 5: Properties of each reactant.

Id	Name	SBO
X001	coenzyme-A	
X002	apo-AcpM	

Modifier

Table 6: Properties of each modifier.

Id	Name	SBO
G001	acpS	

Products

Table 7: Properties of each product.

Id	Name	SBO
X003	ADP	
X004	[acyl-carrier-protein]	

Kinetic Law

$$v_1 = \text{not specified} \tag{2}$$

5.2 Reaction J002

This is an irreversible reaction of three reactants forming three products influenced by one modifier.

Reaction equation

$$\mathrm{X005} + \mathrm{X006} + \mathrm{X007} \xrightarrow{\mathrm{G002}} \mathrm{X008} + \mathrm{X009} + \mathrm{X010} \tag{3}$$

Reactants

Table 8: Properties of each reactant.

Id	Name	SBO
X005	AccB	
X006	biotin	
X007	ATP	

Modifier

Table 9: Properties of each modifier.

Id	Name	SBO
G002	birA	

Products

Table 10: Properties of each product.

Id	Name	SBO
X008	pyrophosphate	
X009	AMP	
X010	BCCP-biotin	

Kinetic Law

$$v_2 = \text{not specified} \tag{4}$$

5.3 Reaction J003

This is an irreversible reaction of three reactants forming four products influenced by one modifier.

Reaction equation

$$\mathrm{X007} + \mathrm{X010} + \mathrm{X011} \xrightarrow{\mathrm{G003}} \mathrm{X003} + \mathrm{X012} + \mathrm{X013} + \mathrm{X014} \tag{5}$$

Reactants

Table 11: Properties of each reactant.

Id	Name	SBO
X007	ATP	
X010	BCCP-biotin	
X011	HCO3-	

Modifier

Table 12: Properties of each modifier.

Id	Name	SBO
G003	accA3	

Products

Table 13: Properties of each product.

Id	Name	SBO
X003	ADP	
X012	phosphate	
X013	BCCP-biotin-CO2	
X014	H+	

Kinetic Law

$$v_3 = \text{not specified} \tag{6}$$

5.4 Reaction J004

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X013} + \mathrm{X015} \xrightarrow{\mathrm{G004}} \mathrm{X016} + \mathrm{X010} \tag{7}$$

Reactants

Table 14: Properties of each reactant.

Id	Name	SBO
X013	BCCP-biotin-CO2	
X015	acetyl-CoA	

Modifier

Table 15: Properties of each modifier.

Id	Name	SBO
G004	accD3	

Products

Table 16: Properties of each product.

Id	Name	SBO
X016	malonyl-CoA	
X010	BCCP-biotin	

Kinetic Law

$$v_4 = \text{not specified} \tag{8}$$

5.5 Reaction J005

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X015} + \text{X017} \xrightarrow{\text{G005}} \text{X018} + \text{X001} \tag{9}$$

Reactants

Table 17: Properties of each reactant.

Id	Name	SBO
X015	acetyl-CoA	
X017	ACP-FAS	

Modifier

Table 18: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 19: Properties of each product.

Id	Name	SBO
X018	C2-acyl-ACP-FAS	
X001	coenzyme-A	

Kinetic Law

$$v_5 = \text{not specified} \tag{10}$$

5.6 Reaction J006

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X018} + \text{X016} \xrightarrow{\text{G005}} \text{X019} + \text{X001} \tag{11}$$

Reactants

Table 20: Properties of each reactant.

Id	Name	SBO
X018	C2-acyl-ACP-FAS	
X016	malonyl-CoA	

Modifier

Table 21: Properties of each modifier.

Id	Name	SBO
G005	fas	

Id	Name	SBO

Products

Table 22: Properties of each product.

Id	Name	SBO
X019	malonyl-C2-acyl-ACP-FAS	
X001	coenzyme-A	

Kinetic Law

$$v_6 = \text{not specified} \tag{12}$$

5.7 Reaction J007

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X019} \xrightarrow{\text{G005}} \text{X020} + \text{X021} \tag{13}$$

Reactant

Table 23: Properties of each reactant.

Id	Name	SBO
X019	malonyl-C2-acyl-ACP-FAS	

Modifier

Table 24: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 25: Properties of each product.

Id	Name	SBO
X020	beta-keto-C4-acyl-ACP-FAS	
X021	CO2	

Kinetic Law

$$v_7 = \text{not specified} \tag{14}$$

5.8 Reaction J008

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X020} \xrightarrow{\text{G005}} \text{X023} + \text{X024} \tag{15}$$

Reactants

Table 26: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X020	beta-keto-C4-acyl-ACP-FAS	

Modifier

Table 27: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 28: Properties of each product.

Id	Name	SBO
X023	D-3-hydroxy-C4-acyl-ACP-FAS	
X024	NADP	

Kinetic Law

$$v_8 = \text{not specified} \tag{16}$$

5.9 Reaction J009

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X023} \xrightarrow{\text{G005}} \text{X025} + \text{X026} \tag{17}$$

Reactant

Table 29: Properties of each reactant.

Id	Name	SBO
X023	D-3-hydroxy-C4-acyl-ACP-FAS	

Modifier

Table 30: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 31: Properties of each product.

Id	Name	SBO
X025	trans-delta-2-enoyl-C4-acyl-ACP-FAS	
X026	H2O	

Kinetic Law

$$v_9 = \text{not specified} \tag{18}$$

5.10 Reaction J010

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X027} + \mathrm{X025} \xrightarrow{\mathrm{G005}} \mathrm{X028} + \mathrm{X029} \tag{19}$$

Reactants

Table 32: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X025	trans-delta-2-enoyl-C4-acyl-ACP-FAS	

Modifier

Table 33: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 34: Properties of each product.

Id	Name	SBO
X028	C4-acyl-ACP-FAS	
X029	NAD	

Kinetic Law

$$v_{10} = \text{not specified} \tag{20}$$

5.11 Reaction J011

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X028} + \mathrm{X016} \xrightarrow{\mathrm{G005}} \mathrm{X030} + \mathrm{X001} \tag{21}$$

Reactants

Table 35: Properties of each reactant.

Id	Name	SBO
X028	C4-acyl-ACP-FAS	
X016	malonyl-CoA	

Modifier

Table 36: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 37: Properties of each product.

Id	Name	SBO
X030	malonyl-C4-acyl-ACP-FAS	
X001	coenzyme-A	

Kinetic Law

$$v_{11} = \text{not specified} \tag{22}$$

5.12 Reaction J012

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X030} \xrightarrow{\text{G005}} \text{X031} + \text{X021} \tag{23}$$

Reactant

Table 38: Properties of each reactant.

Id	Name	SBO
X030	malonyl-C4-acyl-ACP-FAS	

Modifier

Table 39: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 40: Properties of each product.

Id	Name	SBO
X031	beta-keto-C6-acyl-ACP-FAS	
X021	CO2	

Kinetic Law

$$v_{12} = \text{not specified} \tag{24}$$

5.13 Reaction J013

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X031} \xrightarrow{\text{G005}} \text{X032} + \text{X024} \tag{25}$$

Reactants

Table 41: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X031	beta-keto-C6-acyl-ACP-FAS	

Modifier

Table 42: Properties of each modifier.

Id	Name	SBO
G005	fas	

Id	Name	SBO

Products

Table 43: Properties of each product.

Id	Name	SBO
X032	D-3-hydroxy-C6-acyl-ACP-FAS	
X024	NADP	

Kinetic Law

$$v_{13} = \text{not specified} \tag{26}$$

5.14 Reaction J014

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X032} \xrightarrow{\text{G005}} \text{X033} + \text{X026} \tag{27}$$

Reactant

Table 44: Properties of each reactant.

Id	Name	SBO
X032	D-3-hydroxy-C6-acyl-ACP-FAS	

Modifier

Table 45: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 46: Properties of each product.

Id	Name	SBO
X033	trans-delta-2-enoyl-C6-acyl-ACP-FAS	
X026	H2O	

Kinetic Law

$$v_{14} = \text{not specified} \tag{28}$$

5.15 Reaction J015

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X033} \xrightarrow{\text{G005}} \text{X034} + \text{X029} \tag{29}$$

Reactants

Table 47: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X033	trans-delta-2-enoyl-C6-acyl-ACP-FAS	

Modifier

Table 48: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 49: Properties of each product.

Id	Name	SBO
X034	C6-acyl-ACP-FAS	
X029	NAD	

Kinetic Law

$$v_{15} = \text{not specified} \tag{30}$$

5.16 Reaction J016

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X034} + \text{X016} \xrightarrow{\text{G005}} \text{X035} + \text{X001} \tag{31}$$

Reactants

Table 50: Properties of each reactant.

Id	Name	SBO
X034	C6-acyl-ACP-FAS	
X016	malonyl-CoA	

Modifier

Table 51: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 52: Properties of each product.

Id	Name	SBO
X035	malonyl-C6-acyl-ACP-FAS	
X001	coenzyme-A	

Kinetic Law

$$v_{16} = \text{not specified} \tag{32}$$

5.17 Reaction J017

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X035} \xrightarrow{\mathrm{G005}} \mathrm{X036} + \mathrm{X021} \tag{33}$$

Reactant

Table 53: Properties of each reactant.

Id	Name	SBO
X035	malonyl-C6-acyl-ACP-FAS	

Modifier

Table 54: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 55: Properties of each product.

Id	Name	SBO
X036	beta-keto-C8-acyl-ACP-FAS	
X021	CO2	

Kinetic Law

$$v_{17} = \text{not specified} \tag{34}$$

5.18 Reaction J018

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X036} \xrightarrow{\mathrm{G005}} \mathrm{X037} + \mathrm{X024} \tag{35}$$

Reactants

Table 56: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X036	beta-keto-C8-acyl-ACP-FAS	

Modifier

Table 57: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 58: Properties of each product.

Id	Name	SBO
X037	D-3-hydroxy-C8-acyl-ACP-FAS	
X024	NADP	

Kinetic Law

$$v_{18} = \text{not specified} \tag{36}$$

5.19 Reaction J019

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X037} \xrightarrow{\text{G005}} \text{X038} + \text{X026} \tag{37}$$

Reactant

Table 59: Properties of each reactant.

Id	Name	SBO
X037	D-3-hydroxy-C8-acyl-ACP-FAS	

Modifier

Table 60: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 61: Properties of each product.

Id	Name	SBO
X038	trans-delta-2-enoyl-C8-acyl-ACP-FAS	
X026	H2O	

Kinetic Law

$$v_{19} = \text{not specified} \tag{38}$$

5.20 Reaction J020

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X038} \xrightarrow{\text{G005}} \text{X039} + \text{X029} \tag{39}$$

Reactants

Table 62: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X038	trans-delta-2-enoyl-C8-acyl-ACP-FAS	

Modifier

Table 63: Properties of each modifier.

Id	Name	SBO
G005	fas	

Id	Name	SBO

Products

Table 64: Properties of each product.

Id	Name	SBO
X039	C8-acyl-ACP-FAS	
X029	NAD	

Kinetic Law

$$v_{20} = \text{not specified} \tag{40}$$

5.21 Reaction J021

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X039} + \text{X016} \xrightarrow{\text{G005}} \text{X040} + \text{X001} \tag{41}$$

Reactants

Table 65: Properties of each reactant.

Id	Name	SBO
X039	C8-acyl-ACP-FAS	
X016	malonyl-CoA	

Modifier

Table 66: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 67: Properties of each product.

Id	Name	SBO
X040	malonyl-C8-acyl-ACP-FAS	
X001	coenzyme-A	

Kinetic Law

$$v_{21} = \text{not specified} \tag{42}$$

5.22 Reaction J022

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X040} \xrightarrow{\text{G005}} \text{X041} + \text{X021} \tag{43}$$

Reactant

Table 68: Properties of each reactant.

Id	Name	SBO
X040	malonyl-C8-acyl-ACP-FAS	

Modifier

Table 69: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 70: Properties of each product.

Id	Name	SBO
X041	beta-keto-C10-acyl-ACP-FAS	
X021	CO2	

Kinetic Law

$$v_{22} = \text{not specified} \tag{44}$$

5.23 Reaction J023

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X041} \xrightarrow{\text{G005}} \text{X042} + \text{X024} \tag{45}$$

Reactants

Table 71: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X041	beta-keto-C10-acyl-ACP-FAS	

Modifier

Table 72: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 73: Properties of each product.

Id	Name	SBO
X042	D-3-hydroxy-C10-acyl-ACP-FAS	
X024	NADP	

Kinetic Law

$$v_{23} = \text{not specified} \tag{46}$$

5.24 Reaction J024

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X042} \xrightarrow{\mathrm{G005}} \mathrm{X043} + \mathrm{X026} \tag{47}$$

Reactant

Table 74: Properties of each reactant.

Id	Name	SBO
X042	D-3-hydroxy-C10-acyl-ACP-FAS	

Modifier

Table 75: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 76: Properties of each product.

Id	Name	SBO
X043	trans-delta-2-enoyl-C10-acyl-ACP-FAS	
X026	H2O	

Kinetic Law

$$v_{24} = \text{not specified} \tag{48}$$

5.25 Reaction J025

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X027} + \mathrm{X043} \xrightarrow{\mathrm{G005}} \mathrm{X044} + \mathrm{X029} \tag{49}$$

Reactants

Table 77: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X043	trans-delta-2-enoyl-C10-acyl-ACP-FAS	

Modifier

Table 78: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 79: Properties of each product.

Id	Name	SBO
X044	C10-acyl-ACP-FAS	
X029	NAD	

Kinetic Law

$$v_{25} = \text{not specified} \tag{50}$$

5.26 Reaction J026

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X044} + \text{X016} \xrightarrow{\text{G005}} \text{X045} + \text{X001} \tag{51}$$

Reactants

Table 80: Properties of each reactant.

Id	Name	SBO
X044	C10-acyl-ACP-FAS	
X016	malonyl-CoA	

Modifier

Table 81: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 82: Properties of each product.

Id	Name	SBO
X045	malonyl-C10-acyl-ACP-FAS	
X001	coenzyme-A	

Kinetic Law

$$v_{26} = \text{not specified} \tag{52}$$

5.27 Reaction J027

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X045} \xrightarrow{\text{G005}} \text{X046} + \text{X021} \tag{53}$$

Reactant

Table 83: Properties of each reactant.

Id	Name	SBO
X045	malonyl-C10-acyl-ACP-FAS	

Modifier

Table 84: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 85: Properties of each product.

Id	Name	SBO
X046	beta-keto-C12-acyl-ACP-FAS	
X021	CO2	

Kinetic Law

$$v_{27} = \text{not specified} \tag{54}$$

5.28 Reaction J028

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X046} \xrightarrow{\text{G005}} \text{X047} + \text{X024} \tag{55}$$

Reactants

Table 86: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X046	beta-keto-C12-acyl-ACP-FAS	

Modifier

Table 87: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 88: Properties of each product.

Id	Name	SBO
X047	D-3-hydroxy-C12-acyl-ACP-FAS	

Id	Name	SBO
X024	NADP	

Kinetic Law

$$v_{28} = \text{not specified} \tag{56}$$

5.29 Reaction J029

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X047} \xrightarrow{\text{G005}} \text{X048} + \text{X026} \tag{57}$$

Reactant

Table 89: Properties of each reactant.

Id	Name	SBO
X047	D-3-hydroxy-C12-acyl-ACP-FAS	

Modifier

Table 90: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 91: Properties of each product.

Id	Name	SBO
X048	trans-delta-2-enoyl-C12-acyl-ACP-FAS	
X026	H2O	

Kinetic Law

$$v_{29} = \text{not specified} \tag{58}$$

5.30 Reaction J030

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X027} + \mathrm{X048} \xrightarrow{\mathrm{G005}} \mathrm{X049} + \mathrm{X029} \tag{59}$$

Reactants

Table 92: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X048	trans-delta-2-enoyl-C12-acyl-ACP-FAS	

Modifier

Table 93: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 94: Properties of each product.

Id	Name	SBO
X049	C12-acyl-ACP-FAS	
X029	NAD	

Kinetic Law

$$v_{30} = \text{not specified} \tag{60}$$

5.31 Reaction J031

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X049} + \mathrm{X016} \xrightarrow{\mathrm{G005}} \mathrm{X050} + \mathrm{X001} \tag{61}$$

Reactants

Table 95: Properties of each reactant.

Id	Name	SBO
X049	C12-acyl-ACP-FAS	
X016	malonyl-CoA	

Modifier

Table 96: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 97: Properties of each product.

Id	Name	SBO
X050	malonyl-C12-acyl-ACP-FAS	
X001	coenzyme-A	

Kinetic Law

$$v_{31} = \text{not specified} \tag{62}$$

5.32 Reaction J032

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X050} \xrightarrow{\text{G005}} \text{X051} + \text{X021} \tag{63}$$

Reactant

Table 98: Properties of each reactant.

Id	Name	SBO
X050	malonyl-C12-acyl-ACP-FAS	

Modifier

Table 99: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 100: Properties of each product.

Id	Name	SBO
X051	beta-keto-C14-acyl-ACP-FAS	
X021	CO2	

Kinetic Law

$$v_{32} = \text{not specified} \tag{64}$$

5.33 Reaction J033

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X051} \xrightarrow{\text{G005}} \text{X052} + \text{X024} \tag{65}$$

Reactants

Table 101: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X051	beta-keto-C14-acyl-ACP-FAS	

Modifier

Table 102: Properties of each modifier.

Id	Name	SBO
G005	fas	

Id	Name	SBO

Products

Table 103: Properties of each product.

Id	Name	SBO
X052	D-3-hydroxy-C14-acyl-ACP-FAS	
X024	NADP	

Kinetic Law

$$v_{33} = \text{not specified} \tag{66}$$

5.34 Reaction J034

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X052} \xrightarrow{\text{G005}} \text{X053} + \text{X026} \tag{67}$$

Reactant

Table 104: Properties of each reactant.

Id	Name	SBO
X052	D-3-hydroxy-C14-acyl-ACP-FAS	

Modifier

Table 105: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 106: Properties of each product.

Id	Name	SBO
X053	trans-delta-2-enoyl-C14-acyl-ACP-FAS	
X026	H2O	

Kinetic Law

$$v_{34} = \text{not specified} \tag{68}$$

5.35 Reaction J035

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X053} \xrightarrow{\text{G005}} \text{X054} + \text{X029} \tag{69}$$

Reactants

Table 107: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X053	trans-delta-2-enoyl-C14-acyl-ACP-FAS	

Modifier

Table 108: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 109: Properties of each product.

Id	Name	SBO
X054	C14-acyl-ACP-FAS	
X029	NAD	

Kinetic Law

$$v_{35} = \text{not specified} \tag{70}$$

5.36 Reaction J036

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X054} + \text{X016} \xrightarrow{\text{G005}} \text{X055} + \text{X001} \tag{71}$$

Reactants

Table 110: Properties of each reactant.

Id	Name	SBO
X054	C14-acyl-ACP-FAS	
X016	malonyl-CoA	

Modifier

Table 111: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 112: Properties of each product.

Id	Name	SBO
X055	malonyl-C14-acyl-ACP-FAS	
X001	coenzyme-A	

Kinetic Law

$$v_{36} = \text{not specified} \tag{72}$$

5.37 Reaction J037

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X055} \xrightarrow{\mathrm{G005}} \mathrm{X056} + \mathrm{X021} \tag{73}$$

Reactant

Table 113: Properties of each reactant.

Id	Name	SBO
X055	malonyl-C14-acyl-ACP-FAS	

Modifier

Table 114: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 115: Properties of each product.

Id	Name	SBO
X056	beta-keto-C16-acyl-ACP-FAS	
X021	CO2	

Kinetic Law

$$v_{37} = \text{not specified} \tag{74}$$

5.38 Reaction J038

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X056} \xrightarrow{\mathrm{G005}} \mathrm{X057} + \mathrm{X024} \tag{75}$$

Reactants

Table 116: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X056	beta-keto-C16-acyl-ACP-FAS	

Modifier

Table 117: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 118: Properties of each product.

Id	Name	SBO
X057	D-3-hydroxy-C16-acyl-ACP-FAS	
X024	NADP	

Kinetic Law

$$v_{38} = \text{not specified} \tag{76}$$

5.39 Reaction J039

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X057} \xrightarrow{\text{G005}} \text{X058} + \text{X026} \tag{77}$$

Reactant

Table 119: Properties of each reactant.

Id	Name	SBO
X057	D-3-hydroxy-C16-acyl-ACP-FAS	

Modifier

Table 120: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 121: Properties of each product.

Id	Name	SBO
X058	trans-delta-2-enoyl-C16-acyl-ACP-FAS	
X026	H2O	

Kinetic Law

$$v_{39} = \text{not specified} \tag{78}$$

5.40 Reaction J040

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X058} \xrightarrow{\text{G005}} \text{X059} + \text{X029} \tag{79}$$

Reactants

Table 122: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X058	trans-delta-2-enoyl-C16-acyl-ACP-FAS	

Modifier

Table 123: Properties of each modifier.

Id	Name	SBO
G005	fas	

Id	Name	SBO

Products

Table 124: Properties of each product.

Id	Name	SBO
X059	C16-acyl-ACP-FAS	
X029	NAD	

Kinetic Law

$$v_{40} = \text{not specified} \tag{80}$$

5.41 Reaction J041

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X059} + \text{X016} \xrightarrow{\text{G005}} \text{X060} + \text{X001} \tag{81}$$

Reactants

Table 125: Properties of each reactant.

Id	Name	SBO
X059	C16-acyl-ACP-FAS	
X016	malonyl-CoA	

Modifier

Table 126: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 127: Properties of each product.

Id	Name	SBO
X060	malonyl-C16-acyl-ACP-FAS	
X001	coenzyme-A	

Kinetic Law

$$v_{41} = \text{not specified} \tag{82}$$

5.42 Reaction J042

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X060} \xrightarrow{\text{G005}} \text{X061} + \text{X021} \tag{83}$$

Reactant

Table 128: Properties of each reactant.

Id	Name	SBO
X060	malonyl-C16-acyl-ACP-FAS	

Modifier

Table 129: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 130: Properties of each product.

Id	Name	SBO
X061	beta-keto-C18-acyl-ACP-FAS	
X021	CO2	

Kinetic Law

$$v_{42} = \text{not specified} \tag{84}$$

5.43 Reaction J043

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X061} \xrightarrow{\text{G005}} \text{X062} + \text{X024} \tag{85}$$

Reactants

Table 131: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X061	beta-keto-C18-acyl-ACP-FAS	

Modifier

Table 132: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 133: Properties of each product.

Id	Name	SBO
X062	D-3-hydroxy-C18-acyl-ACP-FAS	
X024	NADP	

Kinetic Law

$$v_{43} = \text{not specified} \tag{86}$$

5.44 Reaction J044

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X062} \xrightarrow{\mathrm{G005}} \mathrm{X063} + \mathrm{X026} \tag{87}$$

Reactant

Table 134: Properties of each reactant.

Id	Name	SBO
X062	D-3-hydroxy-C18-acyl-ACP-FAS	

Modifier

Table 135: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 136: Properties of each product.

Id	Name	SBO
X063	trans-delta-2-enoyl-C18-acyl-ACP-FAS	
X026	H2O	

Kinetic Law

$$v_{44} = \text{not specified} \tag{88}$$

5.45 Reaction J045

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X027} + \mathrm{X063} \xrightarrow{\mathrm{G005}} \mathrm{X064} + \mathrm{X029} \tag{89}$$

Reactants

Table 137: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X063	trans-delta-2-enoyl-C18-acyl-ACP-FAS	

Modifier

Table 138: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 139: Properties of each product.

Id	Name	SBO
X064	C18-acyl-ACP-FAS	
X029	NAD	

Kinetic Law

$$v_{45} = \text{not specified} \tag{90}$$

5.46 Reaction J046

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X064} + \text{X016} \xrightarrow{\text{G005}} \text{X065} + \text{X001} \tag{91}$$

Reactants

Table 140: Properties of each reactant.

Id	Name	SBO
X064	C18-acyl-ACP-FAS	
X016	malonyl-CoA	

Modifier

Table 141: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 142: Properties of each product.

Id	Name	SBO
X065	malonyl-C18-acyl-ACP-FAS	
X001	coenzyme-A	

Kinetic Law

$$v_{46} = \text{not specified} \tag{92}$$

5.47 Reaction J047

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X065} \xrightarrow{\text{G005}} \text{X066} + \text{X021} \tag{93}$$

Reactant

Table 143: Properties of each reactant.

Id	Name	SBO
X065	malonyl-C18-acyl-ACP-FAS	

Modifier

Table 144: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 145: Properties of each product.

Id	Name	SBO
X066	beta-keto-C20-acyl-ACP-FAS	
X021	CO2	

Kinetic Law

$$v_{47} = \text{not specified} \tag{94}$$

5.48 Reaction J048

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X066} \xrightarrow{\text{G005}} \text{X067} + \text{X024} \tag{95}$$

Reactants

Table 146: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X066	beta-keto-C20-acyl-ACP-FAS	

Modifier

Table 147: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 148: Properties of each product.

Id	Name	SBO
X067	D-3-hydroxy-C20-acyl-ACP-FAS	

Id	Name	SBO
X024	NADP	

Kinetic Law

$$v_{48} = \text{not specified} \tag{96}$$

5.49 Reaction J049

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X067} \xrightarrow{\text{G005}} \text{X068} + \text{X026} \tag{97}$$

Reactant

Table 149: Properties of each reactant.

Id	Name	SBO
X067	D-3-hydroxy-C20-acyl-ACP-FAS	

Modifier

Table 150: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 151: Properties of each product.

Id	Name	SBO
X068	trans-delta-2-enoyl-C20-acyl-ACP-FAS	
X026	H2O	

Kinetic Law

$$v_{49} = \text{not specified} \tag{98}$$

5.50 Reaction J050

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X027} + \mathrm{X068} \xrightarrow{\mathrm{G005}} \mathrm{X069} + \mathrm{X029} \tag{99}$$

Reactants

Table 152: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X068	trans-delta-2-enoyl-C20-acyl-ACP-FAS	

Modifier

Table 153: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 154: Properties of each product.

Id	Name	SBO
X069	C20-acyl-ACP-FAS	
X029	NAD	

Kinetic Law

$$v_{50} = \text{not specified} \tag{100}$$

5.51 Reaction J051

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X069} + \mathrm{X016} \xrightarrow{\mathrm{G005}} \mathrm{X070} + \mathrm{X001} \tag{101}$$

Reactants

Table 155: Properties of each reactant.

Id	Name	SBO
X069	C20-acyl-ACP-FAS	
X016	malonyl-CoA	

Modifier

Table 156: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 157: Properties of each product.

Id	Name	SBO
X070	malonyl-C20-acyl-ACP-FAS	
X001	coenzyme-A	

Kinetic Law

$$v_{51} = \text{not specified} \tag{102}$$

5.52 Reaction J052

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X070} \xrightarrow{\text{G005}} \text{X071} + \text{X021} \tag{103}$$

Reactant

Table 158: Properties of each reactant.

Id	Name	SBO
X070	malonyl-C20-acyl-ACP-FAS	

Modifier

Table 159: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 160: Properties of each product.

Id	Name	SBO
X071	beta-keto-C22-acyl-ACP-FAS	
X021	CO2	

Kinetic Law

$$v_{52} = \text{not specified} \tag{104}$$

5.53 Reaction J053

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X071} \xrightarrow{\text{G005}} \text{X072} + \text{X024} \tag{105}$$

Reactants

Table 161: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X071	beta-keto-C22-acyl-ACP-FAS	

Modifier

Table 162: Properties of each modifier.

Id	Name	SBO
G005	fas	

Id	Name	SBO

Products

Table 163: Properties of each product.

Id	Name	SBO
X072	D-3-hydroxy-C22-acyl-ACP-FAS	
X024	NADP	

Kinetic Law

$$v_{53} = \text{not specified} \tag{106}$$

5.54 Reaction J054

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X072} \xrightarrow{\text{G005}} \text{X073} + \text{X026} \tag{107}$$

Reactant

Table 164: Properties of each reactant.

Id	Name	SBO
X072	D-3-hydroxy-C22-acyl-ACP-FAS	

Modifier

Table 165: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 166: Properties of each product.

Id	Name	SBO
X073	trans-delta-2-enoyl-C22-acyl-ACP-FAS	
X026	H2O	

Kinetic Law

$$v_{54} = \text{not specified} \tag{108}$$

5.55 Reaction J055

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X073} \xrightarrow{\text{G005}} \text{X074} + \text{X029} \tag{109}$$

Reactants

Table 167: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X073	trans-delta-2-enoyl-C22-acyl-ACP-FAS	

Modifier

Table 168: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 169: Properties of each product.

Id	Name	SBO
X074	C22-acyl-ACP-FAS	
X029	NAD	

Kinetic Law

$$v_{55} = \text{not specified} \tag{110}$$

5.56 Reaction J056

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X074} + \text{X016} \xrightarrow{\text{G005}} \text{X075} + \text{X001} \tag{111}$$

Reactants

Table 170: Properties of each reactant.

Id	Name	SBO
X074	C22-acyl-ACP-FAS	
X016	malonyl-CoA	

Modifier

Table 171: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 172: Properties of each product.

Id	Name	SBO
X075	malonyl-C22-acyl-ACP-FAS	
X001	coenzyme-A	

Kinetic Law

$$v_{56} = \text{not specified} \tag{112}$$

5.57 Reaction J057

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X075} \xrightarrow{\mathrm{G005}} \mathrm{X076} + \mathrm{X021} \tag{113}$$

Reactant

Table 173: Properties of each reactant.

Id	Name	SBO
X075	malonyl-C22-acyl-ACP-FAS	

Modifier

Table 174: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 175: Properties of each product.

Id	Name	SBO
X076	beta-keto-C24-acyl-ACP-FAS	
X021	CO2	

Kinetic Law

$$v_{57} = \text{not specified} \tag{114}$$

5.58 Reaction J058

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X076} \xrightarrow{\mathrm{G005}} \mathrm{X077} + \mathrm{X024} \tag{115}$$

Reactants

Table 176: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X076	beta-keto-C24-acyl-ACP-FAS	

Modifier

Table 177: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 178: Properties of each product.

Id	Name	SBO
X077	D-3-hydroxy-C24-acyl-ACP-FAS	
X024	NADP	

Kinetic Law

$$v_{58} = \text{not specified} \tag{116}$$

5.59 Reaction J059

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X077} \xrightarrow{\text{G005}} \text{X078} + \text{X026} \tag{117}$$

Reactant

Table 179: Properties of each reactant.

Id	Name	SBO
X077	D-3-hydroxy-C24-acyl-ACP-FAS	

Modifier

Table 180: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 181: Properties of each product.

Id	Name	SBO
X078	trans-delta-2-enoyl-C24-acyl-ACP-FAS	
X026	H2O	

Kinetic Law

$$v_{59} = \text{not specified} \tag{118}$$

5.60 Reaction J060

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X078} \xrightarrow{\text{G005}} \text{X079} + \text{X029} \tag{119}$$

Reactants

Table 182: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X078	trans-delta-2-enoyl-C24-acyl-ACP-FAS	

Modifier

Table 183: Properties of each modifier.

Id	Name	SBO
G005	fas	

Id	Name	SBO

Products

Table 184: Properties of each product.

Id	Name	SBO
X079	C24-acyl-ACP-FAS	
X029	NAD	

Kinetic Law

$$v_{60} = \text{not specified} \tag{120}$$

5.61 Reaction J061

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X079} + \text{X001} \xrightarrow{\text{G005}} \text{X080} + \text{X017} \tag{121}$$

Reactants

Table 185: Properties of each reactant.

Id	Name	SBO
X079	C24-acyl-ACP-FAS	
X001	coenzyme-A	

Modifier

Table 186: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 187: Properties of each product.

Id	Name	SBO
X080	C24-acyl-S-CoA	
X017	ACP-FAS	

Kinetic Law

$$v_{61} = \text{not specified} \tag{122}$$

5.62 Reaction J062

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X059} + \text{X001} \xrightarrow{\text{G005}} \text{X081} + \text{X017} \tag{123}$$

Reactants

Table 188: Properties of each reactant.

Id	Name	SBO
X059	C16-acyl-ACP-FAS	
X001	coenzyme-A	

Modifier

Table 189: Properties of each modifier.

Id	Name	SBO
G005	fas	

Products

Table 190: Properties of each product.

Id	Name	SBO
X081	C16-acyl-S-CoA	
X017	ACP-FAS	

Kinetic Law

$$v_{62} = \text{not specified} \tag{124}$$

5.63 Reaction J063

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X004} + \text{X016} \xrightarrow{\text{G006}} \text{X082} + \text{X001} \tag{125}$$

Reactants

Table 191: Properties of each reactant.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X016	malonyl-CoA	

Modifier

Table 192: Properties of each modifier.

Id	Name	SBO
G006	fabD	

Products

Table 193: Properties of each product.

Id	Name	SBO
X082	malonyl-ACP	
X001	coenzyme-A	

Kinetic Law

$$v_{63} = \text{not specified} \tag{126}$$

5.64 Reaction J064

This is an irreversible reaction of two reactants forming three products influenced by one modifier.

Reaction equation

$$\mathrm{X081} + \mathrm{X082} \xrightarrow{\mathrm{G007}} \mathrm{X001} + \mathrm{X083} + \mathrm{X021} \tag{127}$$

Reactants

Table 194: Properties of each reactant.

Id	Name	SBO
X081	C16-acyl-S-CoA	
X082	malonyl-ACP	

Modifier

Table 195: Properties of each modifier.

Id	Name	SBO
G007	fabH	

Products

Table 196: Properties of each product.

Id	Name	SBO
X001	coenzyme-A	
X083	beta-keto-C18-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{64} = \text{not specified} \tag{128}$$

5.65 Reaction J065

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X083} \xrightarrow{\mathrm{G008}} \mathrm{X084} + \mathrm{X024} \tag{129}$$

Reactants

Table 197: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X083	beta-keto-C18-acyl-ACP	

Modifier

Table 198: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 199: Properties of each product.

Id	Name	SBO
X084	D-3-hydroxy-C18-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{65} = \text{not specified} \tag{130}$$

5.66 Reaction J066

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X083} \xrightarrow{\mathrm{G009}} \mathrm{X084} + \mathrm{X024} \tag{131}$$

Reactants

Table 200: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X083	beta-keto-C18-acyl-ACP	

Modifier

Table 201: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 202: Properties of each product.

Id	Name	SBO
X084	D-3-hydroxy-C18-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{66} = \text{not specified} \tag{132}$$

5.67 Reaction J067

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X083} \xrightarrow{\text{G010}} \text{X084} + \text{X024} \tag{133}$$

Reactants

Table 203: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X083	beta-keto-C18-acyl-ACP	

Modifier

Table 204: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 205: Properties of each product.

Id	Name	SBO
X084	D-3-hydroxy-C18-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{67} = \text{not specified} \tag{134}$$

5.68 Reaction J068

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X084} \xrightarrow{\text{G011}} \text{X085} + \text{X026} \tag{135}$$

Reactant

Table 206: Properties of each reactant.

Id	Name	SBO
X084	D-3-hydroxy-C18-acyl-ACP	

Modifier

Table 207: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 208: Properties of each product.

Id	Name	SBO
X085	trans-delta-2-enoyl-C18-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{68} = \text{not specified} \tag{136}$$

5.69 Reaction J069

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X085} \xrightarrow{\text{G012}} \text{X086} + \text{X029} \tag{137}$$

Reactants

Table 209: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X085	trans-delta-2-enoyl-C18-acyl-ACP	

Modifier

Table 210: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 211: Properties of each product.

Id	Name	SBO
X086	C18-acyl-ACP	

Id	Name	SBO
X029	NAD	

Kinetic Law

$$v_{69} = \text{not specified} \tag{138}$$

5.70 Reaction J070

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\text{X086} + \text{X082} \xrightarrow{\text{G013, G014}} \text{X004} + \text{X087} + \text{X021} \tag{139}$$

Reactants

Table 212: Properties of each reactant.

Id	Name	SBO
X086	C18-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 213: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 214: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X087	beta-keto-C20-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{70} = \text{not specified} \tag{140}$$

5.71 Reaction J071

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X087} \xrightarrow{\text{G008}} \text{X088} + \text{X024} \tag{141}$$

Reactants

Table 215: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X087	beta-keto-C20-acyl-ACP	

Modifier

Table 216: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 217: Properties of each product.

Id	Name	SBO
X088	D-3-hydroxy-C20-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{71} = \text{not specified} \tag{142}$$

5.72 Reaction J072

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X087} \xrightarrow{\mathrm{G009}} \mathrm{X088} + \mathrm{X024} \tag{143}$$

Reactants

Table 218: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X087	beta-keto-C20-acyl-ACP	

Modifier

Table 219: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 220: Properties of each product.

Id	Name	SBO
X088	D-3-hydroxy-C20-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{72} = \text{not specified} \tag{144}$$

5.73 Reaction J073

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X087} \xrightarrow{\mathrm{G010}} \mathrm{X088} + \mathrm{X024} \tag{145}$$

Reactants

Table 221: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X087	beta-keto-C20-acyl-ACP	

Modifier

Table 222: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 223: Properties of each product.

Id	Name	SBO
X088	D-3-hydroxy-C20-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{73} = \text{not specified} \tag{146}$$

5.74 Reaction J074

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X088} \xrightarrow{\text{G011}} \text{X089} + \text{X026} \tag{147}$$

Reactant

Table 224: Properties of each reactant.

Id	Name	SBO
X088	D-3-hydroxy-C20-acyl-ACP	

Modifier

Table 225: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 226: Properties of each product.

Id	Name	SBO
X089	trans-delta-2-enoyl-C20-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{74} = \text{not specified} \tag{148}$$

5.75 Reaction J075

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X089} \xrightarrow{\text{G012}} \text{X090} + \text{X029} \tag{149}$$

Reactants

Table 227: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X089	trans-delta-2-enoyl-C20-acyl-ACP	

Modifier

Table 228: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Id	Name	SBO

Products

Table 229: Properties of each product.

Id	Name	SBO
X090	C20-acyl-ACP	
X029	NAD	

Kinetic Law

$$v_{75} = \text{not specified} \tag{150}$$

5.76 Reaction J076

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\text{X090} + \text{X082} \xrightarrow{\text{G013, G014}} \text{X004} + \text{X091} + \text{X021} \tag{151}$$

Reactants

Table 230: Properties of each reactant.

Id	Name	SBO
X090	C20-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 231: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 232: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X091	beta-keto-C22-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{76} = \text{not specified} \tag{152}$$

5.77 Reaction J077

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X091} \xrightarrow{\text{G008}} \text{X092} + \text{X024} \tag{153}$$

Reactants

Table 233: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X091	beta-keto-C22-acyl-ACP	

Modifier

Table 234: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 235: Properties of each product.

Id	Name	SBO
X092	D-3-hydroxy-C22-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{77} = \text{not specified} \tag{154}$$

5.78 Reaction J078

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X091} \xrightarrow{\text{G009}} \text{X092} + \text{X024} \tag{155}$$

Reactants

Table 236: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X091	beta-keto-C22-acyl-ACP	

Modifier

Table 237: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 238: Properties of each product.

Id	Name	SBO
X092	D-3-hydroxy-C22-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{78} = \text{not specified} \tag{156}$$

5.79 Reaction J079

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X091} \xrightarrow{\mathrm{G010}} \mathrm{X092} + \mathrm{X024} \tag{157}$$

Reactants

Table 239: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X091	beta-keto-C22-acyl-ACP	

Modifier

Table 240: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 241: Properties of each product.

Id	Name	SBO
X092	D-3-hydroxy-C22-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{79} = \text{not specified} \tag{158}$$

5.80 Reaction J080

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X092} \xrightarrow{\mathrm{G011}} \mathrm{X093} + \mathrm{X026} \tag{159}$$

Reactant

Table 242: Properties of each reactant.

Id	Name	SBO
X092	D-3-hydroxy-C22-acyl-ACP	

Modifier

Table 243: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 244: Properties of each product.

Id	Name	SBO
X093	trans-delta-2-enoyl-C22-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{80} = \text{not specified} \tag{160}$$

5.81 Reaction J081

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X093} \xrightarrow{\text{G012}} \text{X094} + \text{X029} \tag{161}$$

Reactants

Table 245: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X093	trans-delta-2-enoyl-C22-acyl-ACP	

Modifier

Table 246: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 247: Properties of each product.

Id	Name	SBO
X094	C22-acyl-ACP	
X029	NAD	

Kinetic Law

$$v_{81} = \text{not specified} \tag{162}$$

5.82 Reaction J082

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\text{X094} + \text{X082} \xrightarrow{\text{G013, G014}} \text{X004} + \text{X095} + \text{X021} \tag{163}$$

Reactants

Table 248: Properties of each reactant.

Id	Name	SBO
X094	C22-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 249: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 250: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X095	beta-keto-C24-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{82} = \text{not specified} \tag{164}$$

5.83 Reaction J083

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X095} \xrightarrow{\text{G008}} \text{X096} + \text{X024} \tag{165}$$

Reactants

Table 251: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X095	beta-keto-C24-acyl-ACP	

Modifier

Table 252: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 253: Properties of each product.

Id	Name	SBO
X096	D-3-hydroxy-C24-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{83} = \text{not specified} \tag{166}$$

5.84 Reaction J084

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X095} \xrightarrow{\text{G009}} \text{X096} + \text{X024} \tag{167}$$

Reactants

Table 254: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X095	beta-keto-C24-acyl-ACP	

Modifier

Table 255: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 256: Properties of each product.

Id	Name	SBO
X096	D-3-hydroxy-C24-acyl-ACP	

Id	Name	SBO
X024	NADP	

Kinetic Law

$$v_{84} = \text{not specified} \tag{168}$$

5.85 Reaction J085

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X095} \xrightarrow{\text{G010}} \text{X096} + \text{X024} \tag{169}$$

Reactants

Table 257: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X095	beta-keto-C24-acyl-ACP	

Modifier

Table 258: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 259: Properties of each product.

Id	Name	SBO
X096	D-3-hydroxy-C24-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{85} = \text{not specified} \tag{170}$$

5.86 Reaction J086

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X096} \xrightarrow{\mathrm{G011}} \mathrm{X097} + \mathrm{X026} \tag{171}$$

Reactant

Table 260: Properties of each reactant.

Id	Name	SBO
X096	D-3-hydroxy-C24-acyl-ACP	

Modifier

Table 261: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 262: Properties of each product.

Id	Name	SBO
X097	trans-delta-2-enoyl-C24-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{86} = \text{not specified} \tag{172}$$

5.87 Reaction J087

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X027} + \mathrm{X097} \xrightarrow{\mathrm{G012}} \mathrm{X098} + \mathrm{X029} \tag{173}$$

Reactants

Table 263: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X097	trans-delta-2-enoyl-C24-acyl-ACP	

Modifier

Table 264: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 265: Properties of each product.

Id	Name	SBO
X098	C24-acyl-ACP	
X029	NAD	

Kinetic Law

$$v_{87} = \text{not specified} \tag{174}$$

5.88 Reaction J088

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\text{X098} + \text{X082} \xrightarrow{\text{G013, G014}} \text{X004} + \text{X099} + \text{X021} \tag{175}$$

Reactants

Table 266: Properties of each reactant.

Id	Name	SBO
X098	C24-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 267: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 268: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X099	beta-keto-C26-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{88} = \text{not specified} \tag{176}$$

5.89 Reaction J089

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X099} \xrightarrow{\text{G008}} \text{X100} + \text{X024} \tag{177}$$

Reactants

Table 269: Properties of each reactant.

Id	Name	SBO
X022	NADPH	

Id	Name	SBO
X099	beta-keto-C26-acyl-ACP	

Modifier

Table 270: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 271: Properties of each product.

Id	Name	SBO
X100	D-3-hydroxy-C26-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{89} = \text{not specified} \tag{178}$$

5.90 Reaction J090

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X099} \xrightarrow{\text{G009}} \text{X100} + \text{X024} \tag{179}$$

Reactants

Table 272: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X099	beta-keto-C26-acyl-ACP	

Modifier

Table 273: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 274: Properties of each product.

Id	Name	SBO
X100	D-3-hydroxy-C26-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{90} = \text{not specified} \tag{180}$$

5.91 Reaction J091

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X099} \xrightarrow{\text{G010}} \text{X100} + \text{X024} \tag{181}$$

Reactants

Table 275: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X099	beta-keto-C26-acyl-ACP	

Modifier

Table 276: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 277: Properties of each product.

Id	Name	SBO
X100	D-3-hydroxy-C26-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{91} = \text{not specified} \tag{182}$$

5.92 Reaction J092

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X100} \xrightarrow{\text{G011}} \text{X101} + \text{X026} \tag{183}$$

Reactant

Table 278: Properties of each reactant.

Id	Name	SBO
X100	D-3-hydroxy-C26-acyl-ACP	

Modifier

Table 279: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 280: Properties of each product.

Id	Name	SBO
X101	trans-delta-2-enoyl-C26-acyl-ACP	
X026	H2O	

Id	Name	SBO

Kinetic Law

$$v_{92} = \text{not specified} \tag{184}$$

5.93 Reaction J093

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X101} \xrightarrow{\text{G012}} \text{X102} + \text{X029} \tag{185}$$

Reactants

Table 281: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X101	trans-delta-2-enoyl-C26-acyl-ACP	

Modifier

Table 282: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 283: Properties of each product.

Id	Name	SBO
X102	C26-acyl-ACP	
X029	NAD	

Kinetic Law

$$v_{93} = \text{not specified} \tag{186}$$

5.94 Reaction J094

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\mathrm{X102} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X103} + \mathrm{X021} \tag{187}$$

Reactants

Table 284: Properties of each reactant.

Id	Name	SBO
X102	C26-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 285: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 286: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X103	beta-keto-C28-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{94} = \text{not specified} \tag{188}$$

5.95 Reaction J095

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X103} \xrightarrow{\mathrm{G008}} \mathrm{X104} + \mathrm{X024} \tag{189}$$

Reactants

Table 287: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X103	beta-keto-C28-acyl-ACP	

Modifier

Table 288: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 289: Properties of each product.

Id	Name	SBO
X104	D-3-hydroxy-C28-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{95} = \text{not specified} \tag{190}$$

5.96 Reaction J096

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X103} \xrightarrow{\mathrm{G009}} \mathrm{X104} + \mathrm{X024} \tag{191}$$

Reactants

Table 290: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X103	beta-keto-C28-acyl-ACP	

Modifier

Table 291: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 292: Properties of each product.

Id	Name	SBO
X104	D-3-hydroxy-C28-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{96} = \text{not specified} \tag{192}$$

5.97 Reaction J097

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X103} \xrightarrow{\text{G010}} \text{X104} + \text{X024} \tag{193}$$

Reactants

Table 293: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X103	beta-keto-C28-acyl-ACP	

Modifier

Table 294: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 295: Properties of each product.

Id	Name	SBO
X104	D-3-hydroxy-C28-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{97} = \text{not specified} \tag{194}$$

5.98 Reaction J098

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X104} \xrightarrow{\text{G011}} \text{X105} + \text{X026} \tag{195}$$

Reactant

Table 296: Properties of each reactant.

Id	Name	SBO
X104	D-3-hydroxy-C28-acyl-ACP	

Modifier

Table 297: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 298: Properties of each product.

Id	Name	SBO
X105	trans-delta-2-enoyl-C28-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{98} = \text{not specified} \tag{196}$$

5.99 Reaction J099

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X105} \xrightarrow{\text{G012}} \text{X106} + \text{X029} \tag{197}$$

Reactants

Table 299: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X105	trans-delta-2-enoyl-C28-acyl-ACP	

Modifier

Table 300: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 301: Properties of each product.

Id	Name	SBO
X106	C28-acyl-ACP	

Id	Name	SBO
X029	NAD	

Kinetic Law

$$v_{99} = \text{not specified} \tag{198}$$

5.100 Reaction J100

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\text{X106} + \text{X082} \xrightarrow{\text{G013, G014}} \text{X004} + \text{X107} + \text{X021} \tag{199}$$

Reactants

Table 302: Properties of each reactant.

Id	Name	SBO
X106	C28-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 303: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 304: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X107	beta-keto-C30-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{100} = \text{not specified} \tag{200}$$

5.101 Reaction J101

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X107} \xrightarrow{\text{G008}} \text{X108} + \text{X024} \tag{201}$$

Reactants

Table 305: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X107	beta-keto-C30-acyl-ACP	

Modifier

Table 306: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 307: Properties of each product.

Id	Name	SBO
X108	D-3-hydroxy-C30-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{101} = \text{not specified} \tag{202}$$

5.102 Reaction J102

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X107} \xrightarrow{\mathrm{G009}} \mathrm{X108} + \mathrm{X024} \tag{203}$$

Reactants

Table 308: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X107	beta-keto-C30-acyl-ACP	

Modifier

Table 309: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 310: Properties of each product.

Id	Name	SBO
X108	D-3-hydroxy-C30-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{102} = \text{not specified} \tag{204}$$

5.103 Reaction J103

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X107} \xrightarrow{\mathrm{G010}} \mathrm{X108} + \mathrm{X024} \tag{205}$$

Reactants

Table 311: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X107	beta-keto-C30-acyl-ACP	

Modifier

Table 312: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 313: Properties of each product.

Id	Name	SBO
X108	D-3-hydroxy-C30-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{103} = \text{not specified} \tag{206}$$

5.104 Reaction J104

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X108} \xrightarrow{\text{G011}} \text{X109} + \text{X026} \tag{207}$$

Reactant

Table 314: Properties of each reactant.

Id	Name	SBO
X108	D-3-hydroxy-C30-acyl-ACP	

Modifier

Table 315: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 316: Properties of each product.

Id	Name	SBO
X109	trans-delta-2-enoyl-C30-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{104} = \text{not specified} \tag{208}$$

5.105 Reaction J105

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X109} \xrightarrow{\text{G012}} \text{X110} + \text{X029} \tag{209}$$

Reactants

Table 317: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X109	trans-delta-2-enoyl-C30-acyl-ACP	

Modifier

Table 318: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Id	Name	SBO

Products

Table 319: Properties of each product.

Id	Name	SBO
X110	C30-acyl-ACP	
X029	NAD	

Kinetic Law

$$v_{105} = \text{not specified} \tag{210}$$

5.106 Reaction J106

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\text{X110} + \text{X082} \xrightarrow{\text{G013, G014}} \text{X004} + \text{X111} + \text{X021} \tag{211}$$

Reactants

Table 320: Properties of each reactant.

Id	Name	SBO
X110	C30-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 321: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 322: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X111	beta-keto-C32-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{106} = \text{not specified} \tag{212}$$

5.107 Reaction J107

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X111} \xrightarrow{\text{G008}} \text{X112} + \text{X024} \tag{213}$$

Reactants

Table 323: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X111	beta-keto-C32-acyl-ACP	

Modifier

Table 324: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 325: Properties of each product.

Id	Name	SBO
X112	D-3-hydroxy-C32-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{107} = \text{not specified} \tag{214}$$

5.108 Reaction J108

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X111} \xrightarrow{\text{G009}} \text{X112} + \text{X024} \tag{215}$$

Reactants

Table 326: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X111	beta-keto-C32-acyl-ACP	

Modifier

Table 327: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 328: Properties of each product.

Id	Name	SBO
X112	D-3-hydroxy-C32-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{108} = \text{not specified} \tag{216}$$

5.109 Reaction J109

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X111} \xrightarrow{\mathrm{G010}} \mathrm{X112} + \mathrm{X024} \tag{217}$$

Reactants

Table 329: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X111	beta-keto-C32-acyl-ACP	

Modifier

Table 330: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 331: Properties of each product.

Id	Name	SBO
X112	D-3-hydroxy-C32-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{109} = \text{not specified} \tag{218}$$

5.110 Reaction J110

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X112} \xrightarrow{\mathrm{G011}} \mathrm{X113} + \mathrm{X026} \tag{219}$$

Reactant

Table 332: Properties of each reactant.

Id	Name	SBO
X112	D-3-hydroxy-C32-acyl-ACP	

Modifier

Table 333: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 334: Properties of each product.

Id	Name	SBO
X113	trans-delta-2-enoyl-C32-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{110} = \text{not specified} \tag{220}$$

5.111 Reaction J111

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X113} \xrightarrow{\text{G012}} \text{X114} + \text{X029} \tag{221}$$

Reactants

Table 335: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X113	trans-delta-2-enoyl-C32-acyl-ACP	

Modifier

Table 336: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 337: Properties of each product.

Id	Name	SBO
X114	C32-acyl-ACP	
X029	NAD	

Kinetic Law

$$v_{111} = \text{not specified} \tag{222}$$

5.112 Reaction J112

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\text{X114} + \text{X082} \xrightarrow{\text{G013, G014}} \text{X004} + \text{X115} + \text{X021} \tag{223}$$

Reactants

Table 338: Properties of each reactant.

Id	Name	SBO
X114	C32-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 339: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 340: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X115	beta-keto-C34-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{112} = \text{not specified} \tag{224}$$

5.113 Reaction J113

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X115} \xrightarrow{\text{G008}} \text{X116} + \text{X024} \tag{225}$$

Reactants

Table 341: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X115	beta-keto-C34-acyl-ACP	

Modifier

Table 342: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 343: Properties of each product.

Id	Name	SBO
X116	D-3-hydroxy-C34-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{113} = \text{not specified} \tag{226}$$

5.114 Reaction J114

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X115} \xrightarrow{\text{G009}} \text{X116} + \text{X024} \tag{227}$$

Reactants

Table 344: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X115	beta-keto-C34-acyl-ACP	

Modifier

Table 345: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 346: Properties of each product.

Id	Name	SBO
X116	D-3-hydroxy-C34-acyl-ACP	

Id	Name	SBO
X024	NADP	

Kinetic Law

$$v_{114} = \text{not specified} \tag{228}$$

5.115 Reaction J115

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X115} \xrightarrow{\text{G010}} \text{X116} + \text{X024} \tag{229}$$

Reactants

Table 347: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X115	beta-keto-C34-acyl-ACP	

Modifier

Table 348: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 349: Properties of each product.

Id	Name	SBO
X116	D-3-hydroxy-C34-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{115} = \text{not specified} \tag{230}$$

5.116 Reaction J116

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X116} \xrightarrow{\mathrm{G011}} \mathrm{X117} + \mathrm{X026} \tag{231}$$

Reactant

Table 350: Properties of each reactant.

Id	Name	SBO
X116	D-3-hydroxy-C34-acyl-ACP	

Modifier

Table 351: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 352: Properties of each product.

Id	Name	SBO
X117	trans-delta-2-enoyl-C34-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{116} = \text{not specified} \tag{232}$$

5.117 Reaction J117

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X027} + \mathrm{X117} \xrightarrow{\mathrm{G012}} \mathrm{X118} + \mathrm{X029} \tag{233}$$

Reactants

Table 353: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X117	trans-delta-2-enoyl-C34-acyl-ACP	

Modifier

Table 354: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 355: Properties of each product.

Id	Name	SBO
X118	C34-acyl-ACP	
X029	NAD	

Kinetic Law

$$v_{117} = \text{not specified} \tag{234}$$

5.118 Reaction J118

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\text{X118} + \text{X082} \xrightarrow{\text{G013, G014}} \text{X004} + \text{X119} + \text{X021} \tag{235}$$

Reactants

Table 356: Properties of each reactant.

Id	Name	SBO
X118	C34-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 357: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 358: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X119	beta-keto-C36-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{118} = \text{not specified} \tag{236}$$

5.119 Reaction J119

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X119} \xrightarrow{\text{G008}} \text{X120} + \text{X024} \tag{237}$$

Reactants

Table 359: Properties of each reactant.

Id	Name	SBO
X022	NADPH	

Id	Name	SBO
X119	beta-keto-C36-acyl-ACP	

Modifier

Table 360: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 361: Properties of each product.

Id	Name	SBO
X120	D-3-hydroxy-C36-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{119} = \text{not specified} \tag{238}$$

5.120 Reaction J120

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X119} \xrightarrow{\text{G009}} \text{X120} + \text{X024} \tag{239}$$

Reactants

Table 362: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X119	beta-keto-C36-acyl-ACP	

Modifier

Table 363: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 364: Properties of each product.

Id	Name	SBO
X120	D-3-hydroxy-C36-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{120} = \text{not specified} \tag{240}$$

5.121 Reaction J121

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X119} \xrightarrow{\text{G010}} \text{X120} + \text{X024} \tag{241}$$

Reactants

Table 365: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X119	beta-keto-C36-acyl-ACP	

Modifier

Table 366: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 367: Properties of each product.

Id	Name	SBO
X120	D-3-hydroxy-C36-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{121} = \text{not specified} \tag{242}$$

5.122 Reaction J122

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X120} \xrightarrow{\text{G011}} \text{X121} + \text{X026} \tag{243}$$

Reactant

Table 368: Properties of each reactant.

Id	Name	SBO
X120	D-3-hydroxy-C36-acyl-ACP	

Modifier

Table 369: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 370: Properties of each product.

Id	Name	SBO
X121	trans-delta-2-enoyl-C36-acyl-ACP	
X026	H2O	

Id	Name	SBO

Kinetic Law

$$v_{122} = \text{not specified} \tag{244}$$

5.123 Reaction J123

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X121} \xrightarrow{\text{G012}} \text{X122} + \text{X029} \tag{245}$$

Reactants

Table 371: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X121	trans-delta-2-enoyl-C36-acyl-ACP	

Modifier

Table 372: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 373: Properties of each product.

Id	Name	SBO
X122	C36-acyl-ACP	
X029	NAD	

Kinetic Law

$$v_{123} = \text{not specified} \tag{246}$$

5.124 Reaction J124

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\mathrm{X122} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X123} + \mathrm{X021} \tag{247}$$

Reactants

Table 374: Properties of each reactant.

Id	Name	SBO
X122	C36-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 375: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 376: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X123	beta-keto-C38-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{124} = \text{not specified} \tag{248}$$

5.125 Reaction J125

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X123} \xrightarrow{\mathrm{G008}} \mathrm{X124} + \mathrm{X024} \tag{249}$$

Reactants

Table 377: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X123	beta-keto-C38-acyl-ACP	

Modifier

Table 378: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 379: Properties of each product.

Id	Name	SBO
X124	D-3-hydroxy-C38-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{125} = \text{not specified} \tag{250}$$

5.126 Reaction J126

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X123} \xrightarrow{\mathrm{G009}} \mathrm{X124} + \mathrm{X024} \tag{251}$$

Reactants

Table 380: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X123	beta-keto-C38-acyl-ACP	

Modifier

Table 381: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 382: Properties of each product.

Id	Name	SBO
X124	D-3-hydroxy-C38-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{126} = \text{not specified} \tag{252}$$

5.127 Reaction J127

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X123} \xrightarrow{\text{G010}} \text{X124} + \text{X024} \tag{253}$$

Reactants

Table 383: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X123	beta-keto-C38-acyl-ACP	

Modifier

Table 384: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 385: Properties of each product.

Id	Name	SBO
X124	D-3-hydroxy-C38-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{127} = \text{not specified} \tag{254}$$

5.128 Reaction J128

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X124} \xrightarrow{\text{G011}} \text{X125} + \text{X026} \tag{255}$$

Reactant

Table 386: Properties of each reactant.

Id	Name	SBO
X124	D-3-hydroxy-C38-acyl-ACP	

Modifier

Table 387: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 388: Properties of each product.

Id	Name	SBO
X125	trans-delta-2-enoyl-C38-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{128} = \text{not specified} \tag{256}$$

5.129 Reaction J129

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X125} \xrightarrow{\text{G012}} \text{X126} + \text{X029} \tag{257}$$

Reactants

Table 389: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X125	trans-delta-2-enoyl-C38-acyl-ACP	

Modifier

Table 390: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 391: Properties of each product.

Id	Name	SBO
X126	C38-acyl-ACP	

Id	Name	SBO
X029	NAD	

Kinetic Law

$$v_{129} = \text{not specified} \tag{258}$$

5.130 Reaction J130

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\text{X126} + \text{X082} \xrightarrow{\text{G013, G014}} \text{X004} + \text{X127} + \text{X021} \tag{259}$$

Reactants

Table 392: Properties of each reactant.

Id	Name	SBO
X126	C38-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 393: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 394: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X127	beta-keto-C40-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{130} = \text{not specified} \tag{260}$$

5.131 Reaction J131

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X127} \xrightarrow{\text{G008}} \text{X128} + \text{X024} \tag{261}$$

Reactants

Table 395: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X127	beta-keto-C40-acyl-ACP	

Modifier

Table 396: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 397: Properties of each product.

Id	Name	SBO
X128	D-3-hydroxy-C40-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{131} = \text{not specified} \tag{262}$$

5.132 Reaction J132

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X127} \xrightarrow{\mathrm{G009}} \mathrm{X128} + \mathrm{X024} \tag{263}$$

Reactants

Table 398: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X127	beta-keto-C40-acyl-ACP	

Modifier

Table 399: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 400: Properties of each product.

Id	Name	SBO
X128	D-3-hydroxy-C40-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{132} = \text{not specified} \tag{264}$$

5.133 Reaction J133

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X127} \xrightarrow{\mathrm{G010}} \mathrm{X128} + \mathrm{X024} \tag{265}$$

Reactants

Table 401: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X127	beta-keto-C40-acyl-ACP	

Modifier

Table 402: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 403: Properties of each product.

Id	Name	SBO
X128	D-3-hydroxy-C40-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{133} = \text{not specified} \tag{266}$$

5.134 Reaction J134

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X128} \xrightarrow{\text{G011}} \text{X129} + \text{X026} \tag{267}$$

Reactant

Table 404: Properties of each reactant.

Id	Name	SBO
X128	D-3-hydroxy-C40-acyl-ACP	

Modifier

Table 405: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 406: Properties of each product.

Id	Name	SBO
X129	trans-delta-2-enoyl-C40-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{134} = \text{not specified} \tag{268}$$

5.135 Reaction J135

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X129} \xrightarrow{\text{G012}} \text{X130} + \text{X029} \tag{269}$$

Reactants

Table 407: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X129	trans-delta-2-enoyl-C40-acyl-ACP	

Modifier

Table 408: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Id	Name	SBO

Products

Table 409: Properties of each product.

Id	Name	SBO
X130	C40-acyl-ACP	
X029	NAD	

Kinetic Law

$$v_{135} = \text{not specified} \tag{270}$$

5.136 Reaction J136

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\text{X130} + \text{X082} \xrightarrow{\text{G013, G014}} \text{X004} + \text{X131} + \text{X021} \tag{271}$$

Reactants

Table 410: Properties of each reactant.

Id	Name	SBO
X130	C40-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 411: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 412: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X131	beta-keto-C42-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{136} = \text{not specified} \tag{272}$$

5.137 Reaction J137

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X131} \xrightarrow{\text{G008}} \text{X132} + \text{X024} \tag{273}$$

Reactants

Table 413: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X131	beta-keto-C42-acyl-ACP	

Modifier

Table 414: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 415: Properties of each product.

Id	Name	SBO
X132	D-3-hydroxy-C42-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{137} = \text{not specified} \tag{274}$$

5.138 Reaction J138

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X131} \xrightarrow{\text{G009}} \text{X132} + \text{X024} \tag{275}$$

Reactants

Table 416: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X131	beta-keto-C42-acyl-ACP	

Modifier

Table 417: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 418: Properties of each product.

Id	Name	SBO
X132	D-3-hydroxy-C42-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{138} = \text{not specified} \tag{276}$$

5.139 Reaction J139

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X131} \xrightarrow{\mathrm{G010}} \mathrm{X132} + \mathrm{X024} \tag{277}$$

Reactants

Table 419: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X131	beta-keto-C42-acyl-ACP	

Modifier

Table 420: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 421: Properties of each product.

Id	Name	SBO
X132	D-3-hydroxy-C42-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{139} = \text{not specified} \tag{278}$$

5.140 Reaction J140

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X132} \xrightarrow{\mathrm{G011}} \mathrm{X133} + \mathrm{X026} \tag{279}$$

Reactant

Table 422: Properties of each reactant.

Id	Name	SBO
X132	D-3-hydroxy-C42-acyl-ACP	

Modifier

Table 423: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 424: Properties of each product.

Id	Name	SBO
X133	trans-delta-2-enoyl-C42-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{140} = \text{not specified} \tag{280}$$

5.141 Reaction J141

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X133} \xrightarrow{\text{G012}} \text{X134} + \text{X029} \tag{281}$$

Reactants

Table 425: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X133	trans-delta-2-enoyl-C42-acyl-ACP	

Modifier

Table 426: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 427: Properties of each product.

Id	Name	SBO
X134	C42-acyl-ACP	
X029	NAD	

Kinetic Law

$$v_{141} = \text{not specified} \tag{282}$$

5.142 Reaction J142

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\text{X134} + \text{X082} \xrightarrow{\text{G013, G014}} \text{X004} + \text{X135} + \text{X021} \tag{283}$$

Reactants

Table 428: Properties of each reactant.

Id	Name	SBO
X134	C42-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 429: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 430: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X135	beta-keto-C44-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{142} = \text{not specified} \tag{284}$$

5.143 Reaction J143

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X135} \xrightarrow{\text{G008}} \text{X136} + \text{X024} \tag{285}$$

Reactants

Table 431: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X135	beta-keto-C44-acyl-ACP	

Modifier

Table 432: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 433: Properties of each product.

Id	Name	SBO
X136	D-3-hydroxy-C44-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{143} = \text{not specified} \tag{286}$$

5.144 Reaction J144

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X135} \xrightarrow{\text{G009}} \text{X136} + \text{X024} \tag{287}$$

Reactants

Table 434: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X135	beta-keto-C44-acyl-ACP	

Modifier

Table 435: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 436: Properties of each product.

Id	Name	SBO
X136	D-3-hydroxy-C44-acyl-ACP	

Id	Name	SBO
X024	NADP	

Kinetic Law

$$v_{144} = \text{not specified} \tag{288}$$

5.145 Reaction J145

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X135} \xrightarrow{\text{G010}} \text{X136} + \text{X024} \tag{289}$$

Reactants

Table 437: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X135	beta-keto-C44-acyl-ACP	

Modifier

Table 438: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 439: Properties of each product.

Id	Name	SBO
X136	D-3-hydroxy-C44-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{145} = \text{not specified} \tag{290}$$

5.146 Reaction J146

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X136} \xrightarrow{\mathrm{G011}} \mathrm{X137} + \mathrm{X026} \tag{291}$$

Reactant

Table 440: Properties of each reactant.

Id	Name	SBO
X136	D-3-hydroxy-C44-acyl-ACP	

Modifier

Table 441: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 442: Properties of each product.

Id	Name	SBO
X137	trans-delta-2-enoyl-C44-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{146} = \text{not specified} \tag{292}$$

5.147 Reaction J147

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X027} + \mathrm{X137} \xrightarrow{\mathrm{G012}} \mathrm{X138} + \mathrm{X029} \tag{293}$$

Reactants

Table 443: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X137	trans-delta-2-enoyl-C44-acyl-ACP	

Modifier

Table 444: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 445: Properties of each product.

Id	Name	SBO
X138	C44-acyl-ACP	
X029	NAD	

Kinetic Law

$$v_{147} = \text{not specified} \tag{294}$$

5.148 Reaction J148

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\text{X138} + \text{X082} \xrightarrow{\text{G013, G014}} \text{X004} + \text{X139} + \text{X021} \tag{295}$$

Reactants

Table 446: Properties of each reactant.

Id	Name	SBO
X138	C44-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 447: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 448: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X139	beta-keto-C46-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{148} = \text{not specified} \tag{296}$$

5.149 Reaction J149

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X139} \xrightarrow{\text{G008}} \text{X140} + \text{X024} \tag{297}$$

Reactants

Table 449: Properties of each reactant.

Id	Name	SBO
X022	NADPH	

Id	Name	SBO
X139	beta-keto-C46-acyl-ACP	

Modifier

Table 450: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 451: Properties of each product.

Id	Name	SBO
X140	D-3-hydroxy-C46-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{149} = \text{not specified} \tag{298}$$

5.150 Reaction J150

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X139} \xrightarrow{\text{G009}} \text{X140} + \text{X024} \tag{299}$$

Reactants

Table 452: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X139	beta-keto-C46-acyl-ACP	

Modifier

Table 453: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 454: Properties of each product.

Id	Name	SBO
X140	D-3-hydroxy-C46-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{150} = \text{not specified} \tag{300}$$

5.151 Reaction J151

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X139} \xrightarrow{\text{G010}} \text{X140} + \text{X024} \tag{301}$$

Reactants

Table 455: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X139	beta-keto-C46-acyl-ACP	

Modifier

Table 456: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 457: Properties of each product.

Id	Name	SBO
X140	D-3-hydroxy-C46-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{151} = \text{not specified} \tag{302}$$

5.152 Reaction J152

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X140} \xrightarrow{\text{G011}} \text{X141} + \text{X026} \tag{303}$$

Reactant

Table 458: Properties of each reactant.

Id	Name	SBO
X140	D-3-hydroxy-C46-acyl-ACP	

Modifier

Table 459: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 460: Properties of each product.

Id	Name	SBO
X141	trans-delta-2-enoyl-C46-acyl-ACP	
X026	H2O	

Id	Name	SBO

Kinetic Law

$$v_{152} = \text{not specified} \tag{304}$$

5.153 Reaction J153

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X141} \xrightarrow{\text{G012}} \text{X142} + \text{X029} \tag{305}$$

Reactants

Table 461: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X141	trans-delta-2-enoyl-C46-acyl-ACP	

Modifier

Table 462: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 463: Properties of each product.

Id	Name	SBO
X142	C46-acyl-ACP	
X029	NAD	

Kinetic Law

$$v_{153} = \text{not specified} \tag{306}$$

5.154 Reaction J154

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\mathrm{X142} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X143} + \mathrm{X021} \tag{307}$$

Reactants

Table 464: Properties of each reactant.

Id	Name	SBO
X142	C46-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 465: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 466: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X143	beta-keto-C48-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{154} = \text{not specified} \tag{308}$$

5.155 Reaction J155

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X143} \xrightarrow{\mathrm{G008}} \mathrm{X144} + \mathrm{X024} \tag{309}$$

Reactants

Table 467: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X143	beta-keto-C48-acyl-ACP	

Modifier

Table 468: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 469: Properties of each product.

Id	Name	SBO
X144	D-3-hydroxy-C48-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{155} = \text{not specified} \tag{310}$$

5.156 Reaction J156

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X143} \xrightarrow{\mathrm{G009}} \mathrm{X144} + \mathrm{X024} \tag{311}$$

Reactants

Table 470: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X143	beta-keto-C48-acyl-ACP	

Modifier

Table 471: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 472: Properties of each product.

Id	Name	SBO
X144	D-3-hydroxy-C48-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{156} = \text{not specified} \tag{312}$$

5.157 Reaction J157

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X143} \xrightarrow{\text{G010}} \text{X144} + \text{X024} \tag{313}$$

Reactants

Table 473: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X143	beta-keto-C48-acyl-ACP	

Modifier

Table 474: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 475: Properties of each product.

Id	Name	SBO
X144	D-3-hydroxy-C48-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{157} = \text{not specified} \tag{314}$$

5.158 Reaction J158

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X144} \xrightarrow{\text{G011}} \text{X145} + \text{X026} \tag{315}$$

Reactant

Table 476: Properties of each reactant.

Id	Name	SBO
X144	D-3-hydroxy-C48-acyl-ACP	

Modifier

Table 477: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 478: Properties of each product.

Id	Name	SBO
X145	trans-delta-2-enoyl-C48-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{158} = \text{not specified} \tag{316}$$

5.159 Reaction J159

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X145} \xrightarrow{\text{G012}} \text{X146} + \text{X029} \tag{317}$$

Reactants

Table 479: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X145	trans-delta-2-enoyl-C48-acyl-ACP	

Modifier

Table 480: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 481: Properties of each product.

Id	Name	SBO
X146	C48-acyl-ACP	

Id	Name	SBO
X029	NAD	

Kinetic Law

$$v_{159} = \text{not specified} \tag{318}$$

5.160 Reaction J160

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\text{X146} + \text{X082} \xrightarrow{\text{G013, G014}} \text{X004} + \text{X147} + \text{X021} \tag{319}$$

Reactants

Table 482: Properties of each reactant.

Id	Name	SBO
X146	C48-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 483: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 484: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X147	beta-keto-C50-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{160} = \text{not specified} \tag{320}$$

5.161 Reaction J161

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X147} \xrightarrow{\text{G008}} \text{X148} + \text{X024} \tag{321}$$

Reactants

Table 485: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X147	beta-keto-C50-acyl-ACP	

Modifier

Table 486: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 487: Properties of each product.

Id	Name	SBO
X148	D-3-hydroxy-C50-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{161} = \text{not specified} \tag{322}$$

5.162 Reaction J162

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X147} \xrightarrow{\mathrm{G009}} \mathrm{X148} + \mathrm{X024} \tag{323}$$

Reactants

Table 488: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X147	beta-keto-C50-acyl-ACP	

Modifier

Table 489: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 490: Properties of each product.

Id	Name	SBO
X148	D-3-hydroxy-C50-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{162} = \text{not specified} \tag{324}$$

5.163 Reaction J163

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X147} \xrightarrow{\mathrm{G010}} \mathrm{X148} + \mathrm{X024} \tag{325}$$

Reactants

Table 491: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X147	beta-keto-C50-acyl-ACP	

Modifier

Table 492: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 493: Properties of each product.

Id	Name	SBO
X148	D-3-hydroxy-C50-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{163} = \text{not specified} \tag{326}$$

5.164 Reaction J164

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X148} \xrightarrow{\text{G011}} \text{X149} + \text{X026} \tag{327}$$

Reactant

Table 494: Properties of each reactant.

Id	Name	SBO
X148	D-3-hydroxy-C50-acyl-ACP	

Modifier

Table 495: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 496: Properties of each product.

Id	Name	SBO
X149	trans-delta-2-enoyl-C50-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{164} = \text{not specified} \tag{328}$$

5.165 Reaction J165

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X149} \xrightarrow{\text{G012}} \text{X150} + \text{X029} \tag{329}$$

Reactants

Table 497: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X149	trans-delta-2-enoyl-C50-acyl-ACP	

Modifier

Table 498: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Id	Name	SBO

Products

Table 499: Properties of each product.

Id	Name	SBO
X150	C50-acyl-ACP	
X029	NAD	

Kinetic Law

$$v_{165} = \text{not specified} \tag{330}$$

5.166 Reaction J166

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\text{X150} + \text{X082} \xrightarrow{\text{G013, G014}} \text{X004} + \text{X151} + \text{X021} \tag{331}$$

Reactants

Table 500: Properties of each reactant.

Id	Name	SBO
X150	C50-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 501: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 502: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X151	beta-keto-C52-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{166} = \text{not specified} \tag{332}$$

5.167 Reaction J167

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X151} \xrightarrow{\text{G008}} \text{X152} + \text{X024} \tag{333}$$

Reactants

Table 503: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X151	beta-keto-C52-acyl-ACP	

Modifier

Table 504: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 505: Properties of each product.

Id	Name	SBO
X152	D-3-hydroxy-C52-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{167} = \text{not specified} \tag{334}$$

5.168 Reaction J168

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X151} \xrightarrow{\text{G009}} \text{X152} + \text{X024} \tag{335}$$

Reactants

Table 506: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X151	beta-keto-C52-acyl-ACP	

Modifier

Table 507: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 508: Properties of each product.

Id	Name	SBO
X152	D-3-hydroxy-C52-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{168} = \text{not specified} \tag{336}$$

5.169 Reaction J169

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X151} \xrightarrow{\mathrm{G010}} \mathrm{X152} + \mathrm{X024} \tag{337}$$

Reactants

Table 509: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X151	beta-keto-C52-acyl-ACP	

Modifier

Table 510: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 511: Properties of each product.

Id	Name	SBO
X152	D-3-hydroxy-C52-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{169} = \text{not specified} \tag{338}$$

5.170 Reaction J170

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X152} \xrightarrow{\mathrm{G011}} \mathrm{X153} + \mathrm{X026} \tag{339}$$

Reactant

Table 512: Properties of each reactant.

Id	Name	SBO
X152	D-3-hydroxy-C52-acyl-ACP	

Modifier

Table 513: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 514: Properties of each product.

Id	Name	SBO
X153	trans-delta-2-enoyl-C52-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{170} = \text{not specified} \tag{340}$$

5.171 Reaction J171

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X153} \xrightarrow{\text{G012}} \text{X154} + \text{X029} \tag{341}$$

Reactants

Table 515: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X153	trans-delta-2-enoyl-C52-acyl-ACP	

Modifier

Table 516: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 517: Properties of each product.

Id	Name	SBO
X154	C52-acyl-ACP	
X029	NAD	

Kinetic Law

$$v_{171} = \text{not specified} \tag{342}$$

5.172 Reaction J172

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\text{X154} + \text{X082} \xrightarrow{\text{G013, G014}} \text{X004} + \text{X155} + \text{X021} \tag{343}$$

Reactants

Table 518: Properties of each reactant.

Id	Name	SBO
X154	C52-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 519: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 520: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X155	beta-keto-C54-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{172} = \text{not specified} \tag{344}$$

5.173 Reaction J173

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X155} \xrightarrow{\text{G008}} \text{X156} + \text{X024} \tag{345}$$

Reactants

Table 521: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X155	beta-keto-C54-acyl-ACP	

Modifier

Table 522: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 523: Properties of each product.

Id	Name	SBO
X156	D-3-hydroxy-C54-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{173} = \text{not specified} \tag{346}$$

5.174 Reaction J174

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X155} \xrightarrow{\text{G009}} \text{X156} + \text{X024} \tag{347}$$

Reactants

Table 524: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X155	beta-keto-C54-acyl-ACP	

Modifier

Table 525: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 526: Properties of each product.

Id	Name	SBO
X156	D-3-hydroxy-C54-acyl-ACP	

Id	Name	SBO
X024	NADP	

Kinetic Law

$$v_{174} = \text{not specified} \tag{348}$$

5.175 Reaction J175

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X155} \xrightarrow{\text{G010}} \text{X156} + \text{X024} \tag{349}$$

Reactants

Table 527: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X155	beta-keto-C54-acyl-ACP	

Modifier

Table 528: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 529: Properties of each product.

Id	Name	SBO
X156	D-3-hydroxy-C54-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{175} = \text{not specified} \tag{350}$$

5.176 Reaction J176

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X156} \xrightarrow{\mathrm{G011}} \mathrm{X157} + \mathrm{X026} \tag{351}$$

Reactant

Table 530: Properties of each reactant.

Id	Name	SBO
X156	D-3-hydroxy-C54-acyl-ACP	

Modifier

Table 531: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 532: Properties of each product.

Id	Name	SBO
X157	trans-delta-2-enoyl-C54-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{176} = \text{not specified} \tag{352}$$

5.177 Reaction J177

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X027} + \mathrm{X157} \xrightarrow{\mathrm{G012}} \mathrm{X158} + \mathrm{X029} \tag{353}$$

Reactants

Table 533: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X157	trans-delta-2-enoyl-C54-acyl-ACP	

Modifier

Table 534: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 535: Properties of each product.

Id	Name	SBO
X158	C54-acyl-ACP	
X029	NAD	

Kinetic Law

$$v_{177} = \text{not specified} \tag{354}$$

5.178 Reaction J178

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\text{X158} + \text{X082} \xrightarrow{\text{G013, G014}} \text{X004} + \text{X159} + \text{X021} \tag{355}$$

Reactants

Table 536: Properties of each reactant.

Id	Name	SBO
X158	C54-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 537: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 538: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X159	beta-keto-C56-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{178} = \text{not specified} \tag{356}$$

5.179 Reaction J179

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X159} \xrightarrow{\text{G008}} \text{X160} + \text{X024} \tag{357}$$

Reactants

Table 539: Properties of each reactant.

Id	Name	SBO
X022	NADPH	

Id	Name	SBO
X159	beta-keto-C56-acyl-ACP	

Modifier

Table 540: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 541: Properties of each product.

Id	Name	SBO
X160	D-3-hydroxy-C56-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{179} = \text{not specified} \tag{358}$$

5.180 Reaction J180

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X159} \xrightarrow{\text{G009}} \text{X160} + \text{X024} \tag{359}$$

Reactants

Table 542: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X159	beta-keto-C56-acyl-ACP	

Modifier

Table 543: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 544: Properties of each product.

Id	Name	SBO
X160	D-3-hydroxy-C56-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{180} = \text{not specified} \tag{360}$$

5.181 Reaction J181

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X159} \xrightarrow{\text{G010}} \text{X160} + \text{X024} \tag{361}$$

Reactants

Table 545: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X159	beta-keto-C56-acyl-ACP	

Modifier

Table 546: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 547: Properties of each product.

Id	Name	SBO
X160	D-3-hydroxy-C56-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{181} = \text{not specified} \tag{362}$$

5.182 Reaction J182

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X160} \xrightarrow{\text{G011}} \text{X161} + \text{X026} \tag{363}$$

Reactant

Table 548: Properties of each reactant.

Id	Name	SBO
X160	D-3-hydroxy-C56-acyl-ACP	

Modifier

Table 549: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 550: Properties of each product.

Id	Name	SBO
X161	trans-delta-2-enoyl-C56-acyl-ACP	
X026	H2O	

Id	Name	SBO

Kinetic Law

$$v_{182} = \text{not specified} \tag{364}$$

5.183 Reaction J183

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X161} \xrightarrow{\text{G012}} \text{X162} + \text{X029} \tag{365}$$

Reactants

Table 551: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X161	trans-delta-2-enoyl-C56-acyl-ACP	

Modifier

Table 552: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 553: Properties of each product.

Id	Name	SBO
X162	C56-acyl-ACP	
X029	NAD	

Kinetic Law

$$v_{183} = \text{not specified} \tag{366}$$

5.184 Reaction J184

This is an irreversible reaction of two reactants forming three products influenced by two modifiers.

Reaction equation

$$\mathrm{X162} + \mathrm{X082} \xrightarrow{\mathrm{G013,\ G014}} \mathrm{X004} + \mathrm{X163} + \mathrm{X021} \tag{367}$$

Reactants

Table 554: Properties of each reactant.

Id	Name	SBO
X162	C56-acyl-ACP	
X082	malonyl-ACP	

Modifiers

Table 555: Properties of each modifier.

Id	Name	SBO
G013	kasA	
G014	kasB	

Products

Table 556: Properties of each product.

Id	Name	SBO
X004	[acyl-carrier-protein]	
X163	beta-keto-C58-acyl-ACP	
X021	CO2	

Kinetic Law

$$v_{184} = \text{not specified} \tag{368}$$

5.185 Reaction J185

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X163} \xrightarrow{\mathrm{G008}} \mathrm{X164} + \mathrm{X024} \tag{369}$$

Reactants

Table 557: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X163	beta-keto-C58-acyl-ACP	

Modifier

Table 558: Properties of each modifier.

Id	Name	SBO
G008	fabG1/mabA	

Products

Table 559: Properties of each product.

Id	Name	SBO
X164	D-3-hydroxy-C58-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{185} = \text{not specified} \tag{370}$$

5.186 Reaction J186

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X022} + \mathrm{X163} \xrightarrow{\mathrm{G009}} \mathrm{X164} + \mathrm{X024} \tag{371}$$

Reactants

Table 560: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X163	beta-keto-C58-acyl-ACP	

Modifier

Table 561: Properties of each modifier.

Id	Name	SBO
G009	fabG2	

Products

Table 562: Properties of each product.

Id	Name	SBO
X164	D-3-hydroxy-C58-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{186} = \text{not specified} \tag{372}$$

5.187 Reaction J187

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X022} + \text{X163} \xrightarrow{\text{G010}} \text{X164} + \text{X024} \tag{373}$$

Reactants

Table 563: Properties of each reactant.

Id	Name	SBO
X022	NADPH	
X163	beta-keto-C58-acyl-ACP	

Modifier

Table 564: Properties of each modifier.

Id	Name	SBO
G010	fabG4	

Products

Table 565: Properties of each product.

Id	Name	SBO
X164	D-3-hydroxy-C58-acyl-ACP	
X024	NADP	

Kinetic Law

$$v_{187} = \text{not specified} \tag{374}$$

5.188 Reaction J188

This is an irreversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$\text{X164} \xrightarrow{\text{G011}} \text{X165} + \text{X026} \tag{375}$$

Reactant

Table 566: Properties of each reactant.

Id	Name	SBO
X164	D-3-hydroxy-C58-acyl-ACP	

Modifier

Table 567: Properties of each modifier.

Id	Name	SBO
G011	UNK1	

Products

Table 568: Properties of each product.

Id	Name	SBO
X165	trans-delta-2-enoyl-C58-acyl-ACP	
X026	H2O	

Kinetic Law

$$v_{188} = \text{not specified} \tag{376}$$

5.189 Reaction J189

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X027} + \text{X165} \xrightarrow{\text{G012}} \text{X166} + \text{X029} \tag{377}$$

Reactants

Table 569: Properties of each reactant.

Id	Name	SBO
X027	NADH	
X165	trans-delta-2-enoyl-C58-acyl-ACP	

Modifier

Table 570: Properties of each modifier.

Id	Name	SBO
G012	inhA	

Products

Table 571: Properties of each product.

Id	Name	SBO
X166	C58-acyl-ACP	

Id	Name	SBO
X029	NAD	

Kinetic Law

$$v_{189} = \text{not specified} \tag{378}$$

5.190 Reaction J190

This is an irreversible reaction of two reactants forming two products influenced by three modifiers.

Reaction equation

$$\text{X154} + \text{X024} \xrightarrow{\text{G015, G016, G017}} \text{X167} + \text{X022} \tag{379}$$

Reactants

Table 572: Properties of each reactant.

Id	Name	SBO
X154	C52-acyl-ACP	
X024	NADP	

Modifiers

Table 573: Properties of each modifier.

Id	Name	SBO
G015	desA1	
G016	desA2	
G017	desA3	

Products

Table 574: Properties of each product.

Id	Name	SBO
X167	cis-delta-2-19,31-enoyl-C52-acyl-ACP	
X022	NADPH	

Kinetic Law

$$v_{190} = \text{not specified} \tag{380}$$

5.191 Reaction J191

This is an irreversible reaction of two reactants forming two products influenced by three modifiers.

Reaction equation

$$\text{X158} + \text{X024} \xrightarrow{\text{G015, G016, G017}} \text{X168} + \text{X022} \tag{381}$$

Reactants

Table 575: Properties of each reactant.

Id	Name	SBO
X158	C54-acyl-ACP	
X024	NADP	

Modifiers

Table 576: Properties of each modifier.

Id	Name	SBO
G015	desA1	
G016	desA2	
G017	desA3	

Products

Table 577: Properties of each product.

Id	Name	SBO
X168	cis-delta-2-19,37-enoyl-C54-acyl-ACP	
X022	NADPH	

Kinetic Law

$$v_{191} = \text{not specified} \tag{382}$$

5.192 Reaction J192

This is an irreversible reaction of two reactants forming two products influenced by three modifiers.

Reaction equation

$$\mathrm{X166} + \mathrm{X024} \xrightarrow{\mathrm{G015,\ G016,\ G017}} \mathrm{X169} + \mathrm{X022} \tag{383}$$

Reactants

Table 578: Properties of each reactant.

Id	Name	SBO
X166	C58-acyl-ACP	
X024	NADP	

Modifiers

Table 579: Properties of each modifier.

Id	Name	SBO
G015	desA1	
G016	desA2	
G017	desA3	

Products

Table 580: Properties of each product.

Id	Name	SBO
X169	cis-delta-2-19,37-enoyl-C58-acyl-ACP	
X022	NADPH	

Kinetic Law

$$v_{192} = \text{not specified} \tag{384}$$

5.193 Reaction J193

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X167} + \mathrm{X170} \xrightarrow{\mathrm{G018}} \mathrm{X171} + \mathrm{X172} \tag{385}$$

Reactants

Table 581: Properties of each reactant.

Id	Name	SBO
X167	cis-delta-2-19,31-enoyl-C52-acyl-ACP	
X170	S-adenosyl-L-methionine	

Modifier

Table 582: Properties of each modifier.

Id	Name	SBO
G018	mmaA2	

Products

Table 583: Properties of each product.

Id	Name	SBO
X171	cis-delta-1-31-enoyl-19-cp-C53-acyl-ACP	
X172	S-adenosyl-L-homocysteine	

Kinetic Law

$$v_{193} = \text{not specified} \tag{386}$$

5.194 Reaction J194

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X171} + \mathrm{X170} \xrightarrow{\mathrm{G019}} \mathrm{X173} + \mathrm{X172} \tag{387}$$

Reactants

Table 584: Properties of each reactant.

Id	Name	SBO
X171	cis-delta-1-31-enoyl-19-cp-C53-acyl-ACP	
X170	S-adenosyl-L-methionine	

Modifier

Table 585: Properties of each modifier.

Id	Name	SBO
G019	pcaA	

Products

Table 586: Properties of each product.

Id	Name	SBO
X173	19,31-cp-C54-acyl-ACP	
X172	S-adenosyl-L-homocysteine	

Kinetic Law

$$v_{194} = \text{not specified} \tag{388}$$

5.195 Reaction J195

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X173} + \mathrm{X007} \xrightarrow{\mathrm{G020}} \mathrm{X174} + \mathrm{X008} \tag{389}$$

Reactants

Table 587: Properties of each reactant.

Id	Name	SBO
X173	19,31-cp-C54-acyl-ACP	
X007	ATP	

Modifier

Table 588: Properties of each modifier.

Id	Name	SBO
G020	fadD32	

Products

Table 589: Properties of each product.

Id	Name	SBO
X174	19,31-cp-C54-acyl-ACP-AMP	
X008	pyrophosphate	

Kinetic Law

$$v_{195} = \text{not specified} \tag{390}$$

5.196 Reaction J196

This is an irreversible reaction of two reactants forming one product influenced by three modifiers.

Reaction equation

$$\text{X080} + \text{X021} \xrightarrow{\text{G021, G022, G003}} \text{X175} \tag{391}$$

Reactants

Table 590: Properties of each reactant.

Id	Name	SBO
X080	C24-acyl-S-CoA	
X021	CO2	

Modifiers

Table 591: Properties of each modifier.

Id	Name	SBO
G021	accD4	
G022	accD5	
G003	accA3	

Product

Table 592: Properties of each product.

Id	Name	SBO
X175	2-carboxyl-C24-acyl-CoA	

Kinetic Law

$$v_{196} = \text{not specified} \tag{392}$$

5.197 Reaction J197

This is an irreversible reaction of two reactants forming four products influenced by one modifier.

Reaction equation

$$\text{X174} + \text{X175} \xrightarrow{\text{G023}} \text{X176} + \text{X009} + \text{X001} + \text{X004} \tag{393}$$

Reactants

Table 593: Properties of each reactant.

Id	Name	SBO
X174	19,31-cp-C54-acyl-ACP-AMP	
X175	2-carboxyl-C24-acyl-CoA	

Modifier

Table 594: Properties of each modifier.

Id	Name	SBO
G023	pks13	

Products

Table 595: Properties of each product.

Id	Name	SBO
X176	alpha-mycolate	
X009	AMP	
X001	coenzyme-A	
X004	[acyl-carrier-protein]	

Kinetic Law

$$v_{197} = \text{not specified} \tag{394}$$

5.198 Reaction J198

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X168} + \text{X170} \xrightarrow{\text{G024}} \text{X177} + \text{X172} \tag{395}$$

Reactants

Table 596: Properties of each reactant.

Id	Name	SBO
X168	cis-delta-2-19,37-enoyl-C54-acyl-ACP	
X170	S-adenosyl-L-methionine	

Modifier

Table 597: Properties of each modifier.

Id	Name	SBO
G024	mmaA4	

Products

Table 598: Properties of each product.

Id	Name	SBO
X177	cis-delta-37-methyl-hydroxy-C55-acyl-ACP	
X172	S-adenosyl-L-homocysteine	

Kinetic Law

$$v_{198} = \text{not specified} \tag{396}$$

5.199 Reaction J199

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X177} + \text{X170} \xrightarrow{\text{G025}} \text{X178} + \text{X172} \tag{397}$$

Reactants

Table 599: Properties of each reactant.

Id	Name	SBO
X177	cis-delta-37-methyl-hydroxy-C55-acyl-ACP	
X170	S-adenosyl-L-methionine	

Modifier

Table 600: Properties of each modifier.

Id	Name	SBO
G025	mmaA3	

Products

Table 601: Properties of each product.

Id	Name	SBO
X178	cis-delta-37-methyl-hydroxymethyl-C56-acyl-ACP	
X172	S-adenosyl-L-homocysteine	

Kinetic Law

$$v_{199} = \text{not specified} \tag{398}$$

5.200 Reaction J200

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X178} + \text{X170} \xrightarrow{\text{G018}} \text{X179} + \text{X172} \tag{399}$$

Reactants

Table 602: Properties of each reactant.

Id	Name	SBO
X178	cis-delta-37-methyl-hydroxymethyl-C56-acyl-ACP	
X170	S-adenosyl-L-methionine	

Modifier

Table 603: Properties of each modifier.

Id	Name	SBO
G018	mmaA2	

Products

Table 604: Properties of each product.

Id	Name	SBO
X179	cis-methoxy-C57-meroacyl-cp-ACP	
X172	S-adenosyl-L-homocysteine	

Kinetic Law

$$v_{200} = \text{not specified} \tag{400}$$

5.201 Reaction J201

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X178} + \mathrm{X170} \xrightarrow{\mathrm{G026}} \mathrm{X179} + \mathrm{X172} \tag{401}$$

Reactants

Table 605: Properties of each reactant.

Id	Name	SBO
X178	cis-delta-37-methyl-hydroxymethyl-C56-acyl-ACP	
X170	S-adenosyl-L-methionine	

Modifier

Table 606: Properties of each modifier.

Id	Name	SBO
G026	cmaA2	

Products

Table 607: Properties of each product.

Id	Name	SBO
X179	cis-methoxy-C57-meroacyl-cp-ACP	
X172	S-adenosyl-L-homocysteine	

Kinetic Law

$$v_{201} = \text{not specified} \tag{402}$$

5.202 Reaction J202

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X179} + \mathrm{X007} \xrightarrow{\mathrm{G020}} \mathrm{X180} + \mathrm{X008} \tag{403}$$

Reactants

Table 608: Properties of each reactant.

Id	Name	SBO
X179	cis-methoxy-C57-meroacyl-cp-ACP	
X007	ATP	

Modifier

Table 609: Properties of each modifier.

Id	Name	SBO
G020	fadD32	

Products

Table 610: Properties of each product.

Id	Name	SBO
X180	cis-methoxy-C57-meroacyl-cp-ACP-AMP	
X008	pyrophosphate	

Kinetic Law

$$v_{202} = \text{not specified} \tag{404}$$

5.203 Reaction J203

This is an irreversible reaction of two reactants forming four products influenced by one modifier.

Reaction equation

$$\text{X180} + \text{X175} \xrightarrow{\text{G023}} \text{X181} + \text{X009} + \text{X001} + \text{X004} \tag{405}$$

Reactants

Table 611: Properties of each reactant.

Id	Name	SBO
X180	cis-methoxy-C57-meroacyl-cp-ACP-AMP	
X175	2-carboxyl-C24-acyl-CoA	

Modifier

Table 612: Properties of each modifier.

Id	Name	SBO
G023	pks13	

Products

Table 613: Properties of each product.

Id	Name	SBO
X181	cis-methoxy-mycolate	
X009	AMP	
X001	coenzyme-A	
X004	[acyl-carrier-protein]	

Kinetic Law

$$v_{203} = \text{not specified} \tag{406}$$

5.204 Reaction J204

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X168} + \text{X170} \xrightarrow{\text{G027}} \text{X182} + \text{X172} \tag{407}$$

Reactants

Table 614: Properties of each reactant.

Id	Name	SBO
X168	cis-delta-2-19,37-enoyl-C54-acyl-ACP	
X170	S-adenosyl-L-methionine	

Modifier

Table 615: Properties of each modifier.

Id	Name	SBO
G027	mmaA1	

Products

Table 616: Properties of each product.

Id	Name	SBO
X182	delta-2-cis-19,trans-37-enoyl-methyl-C55-acyl-ACP	
X172	S-adenosyl-L-homocysteine	

Kinetic Law

$$v_{204} = \text{not specified} \tag{408}$$

5.205 Reaction J205

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X182} + \text{X170} \xrightarrow{\text{G024}} \text{X183} + \text{X172} \tag{409}$$

Reactants

Table 617: Properties of each reactant.

Id	Name	SBO
X182	delta-2-cis-19,trans-37-enoyl-methyl-C55-acyl-ACP	
X170	S-adenosyl-L-methionine	

Modifier

Table 618: Properties of each modifier.

Id	Name	SBO
G024	mmaA4	

Products

Table 619: Properties of each product.

Id	Name	SBO
X183	trans-delta-37-methyl-hydroxy-C56-acyl-ACP	
X172	S-adenosyl-L-homocysteine	

Kinetic Law

$$v_{205} = \text{not specified} \tag{410}$$

5.206 Reaction J206

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X183} + \text{X170} \xrightarrow{\text{G025}} \text{X184} + \text{X172} \tag{411}$$

Reactants

Table 620: Properties of each reactant.

Id	Name	SBO
X183	trans-delta-37-methyl-hydroxy-C56-acyl-ACP	
X170	S-adenosyl-L-methionine	

Modifier

Table 621: Properties of each modifier.

Id	Name	SBO
G025	mmaA3	

Products

Table 622: Properties of each product.

Id	Name	SBO
X184	trans-delta-37-methyl-hydroxymethyl-C57-acyl-ACP	

Id	Name	SBO
X172	S-adenosyl-L-homocysteine	

Kinetic Law

$$v_{206} = \text{not specified} \tag{412}$$

5.207 Reaction J207

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X184} + \text{X170} \xrightarrow{\text{G026}} \text{X185} + \text{X172} \tag{413}$$

Reactants

Table 623: Properties of each reactant.

Id	Name	SBO
X184	trans-delta-37-methyl-hydroxymethyl-C57-acyl-ACP	
X170	S-adenosyl-L-methionine	

Modifier

Table 624: Properties of each modifier.

Id	Name	SBO
G026	cmaA2	

Products

Table 625: Properties of each product.

Id	Name	SBO
X185	trans-methoxy-C58-meroacyl-cp-ACP	
X172	S-adenosyl-L-homocysteine	

Kinetic Law

$$v_{207} = \text{not specified} \tag{414}$$

5.208 Reaction J208

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X185} + \mathrm{X007} \xrightarrow{\mathrm{G020}} \mathrm{X186} + \mathrm{X008} \tag{415}$$

Reactants

Table 626: Properties of each reactant.

Id	Name	SBO
X185	trans-methoxy-C58-meroacyl-cp-ACP	
X007	ATP	

Modifier

Table 627: Properties of each modifier.

Id	Name	SBO
G020	fadD32	

Products

Table 628: Properties of each product.

Id	Name	SBO
X186	trans-methoxy-C58-meroacyl-cp-ACP-AMP	
X008	pyrophosphate	

Kinetic Law

$$v_{208} = \text{not specified} \tag{416}$$

5.209 Reaction J209

This is an irreversible reaction of two reactants forming four products influenced by one modifier.

Reaction equation

$$\mathrm{X186} + \mathrm{X175} \xrightarrow{\mathrm{G023}} \mathrm{X187} + \mathrm{X009} + \mathrm{X001} + \mathrm{X004} \tag{417}$$

Reactants

Table 629: Properties of each reactant.

Id	Name	SBO
X186	trans-methoxy-C58-meroacyl-cp-ACP-AMP	
X175	2-carboxyl-C24-acyl-CoA	

Modifier

Table 630: Properties of each modifier.

Id	Name	SBO
G023	pks13	

Products

Table 631: Properties of each product.

Id	Name	SBO
X187	trans-methoxy-mycolate	
X009	AMP	
X001	coenzyme-A	
X004	[acyl-carrier-protein]	

Kinetic Law

$$v_{209} = \text{not specified} \tag{418}$$

5.210 Reaction J210

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X169} + \text{X170} \xrightarrow{\text{G024}} \text{X188} + \text{X172} \tag{419}$$

Reactants

Table 632: Properties of each reactant.

Id	Name	SBO
X169	cis-delta-2-19,37-enoyl-C58-acyl-ACP	
X170	S-adenosyl-L-methionine	

Modifier

Table 633: Properties of each modifier.

Id	Name	SBO
G024	mmaA4	

Products

Table 634: Properties of each product.

Id	Name	SBO
X188	cis-delta-37-methyl-hydroxy-C59-acyl-ACP	
X172	S-adenosyl-L-homocysteine	

Kinetic Law

$$v_{210} = \text{not specified} \tag{420}$$

5.211 Reaction J211

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X188} + \text{X024} \xrightarrow{\text{G028}} \text{X189} + \text{X022} \tag{421}$$

Reactants

Table 635: Properties of each reactant.

Id	Name	SBO
X188	cis-delta-37-methyl-hydroxy-C59-acyl-ACP	
X024	NADP	

Modifier

Table 636: Properties of each modifier.

Id	Name	SBO
G028	UNK2	

Products

Table 637: Properties of each product.

Id	Name	SBO
X189	cis-delta-37-methyl-keto-C59-acyl-ACP	
X022	NADPH	

Kinetic Law

$$v_{211} = \text{not specified} \tag{422}$$

5.212 Reaction J212

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X189} + \text{X170} \xrightarrow{\text{G018}} \text{X190} + \text{X172} \tag{423}$$

Reactants

Table 638: Properties of each reactant.

Id	Name	SBO
X189	cis-delta-37-methyl-keto-C59-acyl-ACP	
X170	S-adenosyl-L-methionine	

Modifier

Table 639: Properties of each modifier.

Id	Name	SBO
G018	mmaA2	

Id	Name	SBO

Products

Table 640: Properties of each product.

Id	Name	SBO
X190	cis-keto-C60-meroacyl-ACP	
X172	S-adenosyl-L-homocysteine	

Kinetic Law

$$v_{212} = \text{not specified} \tag{424}$$

5.213 Reaction J213

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X190} + \text{X007} \xrightarrow{\text{G020}} \text{X191} + \text{X008} \tag{425}$$

Reactants

Table 641: Properties of each reactant.

Id	Name	SBO
X190	cis-keto-C60-meroacyl-ACP	
X007	ATP	

Modifier

Table 642: Properties of each modifier.

Id	Name	SBO
G020	fadD32	

Products

Table 643: Properties of each product.

Id	Name	SBO
X191	cis-keto-C60-meroacyl-ACP-AMP	
X008	pyrophosphate	

Kinetic Law

$$v_{213} = \text{not specified} \tag{426}$$

5.214 Reaction J214

This is an irreversible reaction of two reactants forming four products influenced by one modifier.

Reaction equation

$$\text{X191} + \text{X175} \xrightarrow{\text{G023}} \text{X192} + \text{X009} + \text{X001} + \text{X004} \tag{427}$$

Reactants

Table 644: Properties of each reactant.

Id	Name	SBO
X191	cis-keto-C60-meroacyl-ACP-AMP	
X175	2-carboxyl-C24-acyl-CoA	

Modifier

Table 645: Properties of each modifier.

Id	Name	SBO
G023	pks13	

Products

Table 646: Properties of each product.

Id	Name	SBO
X192	cis-keto-mycolate	
X009	AMP	
X001	coenzyme-A	

Id	Name	SBO
X004	[acyl-carrier-protein]	

Kinetic Law

$$v_{214} = \text{not specified} \tag{428}$$

5.215 Reaction J215

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X188} + \text{X170} \xrightarrow{\text{G027}} \text{X193} + \text{X172} \tag{429}$$

Reactants

Table 647: Properties of each reactant.

Id	Name	SBO
X188	cis-delta-37-methyl-hydroxy-C59-acyl-ACP	
X170	S-adenosyl-L-methionine	

Modifier

Table 648: Properties of each modifier.

Id	Name	SBO
G027	mmaA1	

Products

Table 649: Properties of each product.

Id	Name	SBO
X193	trans-delta-37-methyl-hydroxy-C60-acyl-ACP	
X172	S-adenosyl-L-homocysteine	

Kinetic Law

$$v_{215} = \text{not specified} \tag{430}$$

5.216 Reaction J216

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X193} + \mathrm{X024} \xrightarrow{\mathrm{G028}} \mathrm{X194} + \mathrm{X022} \tag{431}$$

Reactants

Table 650: Properties of each reactant.

Id	Name	SBO
X193	trans-delta-37-methyl-hydroxy-C60-acyl-ACP	
X024	NADP	

Modifier

Table 651: Properties of each modifier.

Id	Name	SBO
G028	UNK2	

Products

Table 652: Properties of each product.

Id	Name	SBO
X194	trans-delta-37-methyl-keto-C60-acyl-ACP	
X022	NADPH	

Kinetic Law

$$v_{216} = \text{not specified} \tag{432}$$

5.217 Reaction J217

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{X194} + \mathrm{X170} \xrightarrow{\mathrm{G026}} \mathrm{X195} + \mathrm{X172} \tag{433}$$

Reactants

Table 653: Properties of each reactant.

Id	Name	SBO
X194	trans-delta-37-methyl-keto-C60-acyl-ACP	
X170	S-adenosyl-L-methionine	

Modifier

Table 654: Properties of each modifier.

Id	Name	SBO
G026	cmaA2	

Products

Table 655: Properties of each product.

Id	Name	SBO
X195	trans-keto-C61-meroacyl-ACP	
X172	S-adenosyl-L-homocysteine	

Kinetic Law

$$v_{217} = \text{not specified} \tag{434}$$

5.218 Reaction J218

This is an irreversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\text{X195} + \text{X007} \xrightarrow{\text{G020}} \text{X196} + \text{X008} \tag{435}$$

Reactants

Table 656: Properties of each reactant.

Id	Name	SBO
X195	trans-keto-C61-meroacyl-ACP	

Id	Name	SBO
X007	ATP	

Modifier

Table 657: Properties of each modifier.

Id	Name	SBO
G020	fadD32	

Products

Table 658: Properties of each product.

Id	Name	SBO
X196	trans-keto-C61-meroacyl-ACP-AMP	
X008	pyrophosphate	

Kinetic Law

$$v_{218} = \text{not specified} \tag{436}$$

5.219 Reaction J219

This is an irreversible reaction of two reactants forming four products influenced by one modifier.

Reaction equation

$$\text{X196} + \text{X175} \xrightarrow{\text{G023}} \text{X197} + \text{X009} + \text{X001} + \text{X004} \tag{437}$$

Reactants

Table 659: Properties of each reactant.

Id	Name	SBO
X196	trans-keto-C61-meroacyl-ACP-AMP	
X175	2-carboxyl-C24-acyl-CoA	

Modifier

Table 660: Properties of each modifier.

Id	Name	SBO
G023	pks13	

Products

Table 661: Properties of each product.

Id	Name	SBO
X197	trans-keto-mycolate	
X009	AMP	
X001	coenzyme-A	
X004	[acyl-carrier-protein]	

Kinetic Law

$$v_{219} = \text{not specified} \tag{438}$$

6 Derived Rate Equations

When interpreted as an ordinary differential equation framework, this model implies the following set of equations for the rates of change of each species.

The identifiers for reactions, which are not defined properly or which are lacking a kinetic equation, are highlighted in red.

6.1 Species G001

Name acpS

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a modifier in J001).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G001} = 0 \tag{439}$$

6.2 Species X001

Name coenzyme-A

Initial amount 0 mol

Charge 0

This species takes part in 22 reactions (as a reactant in J001, J061, J062 and as a product in J005, J006, J011, J016, J021, J026, J031, J036, J041, J046, J051, J056, J063, J064, J197, J203, J209, J214, J219).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X001} = v_5 + v_6 + v_{11} + v_{16} + v_{21} + v_{26} + v_{31} + v_{36} + v_{41} + v_{46} + v_{51} + v_{56} + v_{63} + v_{64} + v_{197} + v_{203} + v_{209} + v_{214} + v_{219} - v_1 - v_{61} - v_{62} \quad (440)$$

6.3 Species X002

Name apo-AcpM

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a reactant in J001).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X002} = -v_1 \quad (441)$$

6.4 Species X003

Name ADP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a product in J001, J003).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X003} = v_1 + v_3 \quad (442)$$

6.5 Species X004

Name [acyl-carrier-protein]

Initial amount 0 mol

Charge 0

This species takes part in 27 reactions (as a reactant in J063 and as a product in J001, J070, J076, J082, J088, J094, J100, J106, J112, J118, J124, J130, J136, J142, J148, J154, J160, J166, J172, J178, J184, J197, J203, J209, J214, J219).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X004} = v_1 + v_{70} + v_{76} + v_{82} + v_{88} + v_{94} + v_{100} + v_{106} + v_{112} + v_{118} + v_{124} + v_{130} + v_{136} + v_{142} + v_{148} + v_{154} + v_{160} + v_{166} + v_{172} + v_{178} + v_{184} + v_{197} + v_{203} + v_{209} + v_{214} + v_{219} - v_{63} \quad (443)$$

6.6 Species G002

Name birA

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a modifier in J002).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G002} = 0 \tag{444}$$

6.7 Species X005

Name AccB

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a reactant in J002).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X005} = -v_2 \tag{445}$$

6.8 Species X006

Name biotin

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a reactant in J002).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X006} = -v_2 \tag{446}$$

6.9 Species X007

Name ATP

Initial amount 0 mol

Charge 0

This species takes part in seven reactions (as a reactant in J002, J003, J195, J202, J208, J213, J218).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X007} = -v_2 - v_3 - v_{195} - v_{202} - v_{208} - v_{213} - v_{218} \tag{447}$$

6.10 Species X008

Name pyrophosphate

Initial amount 0 mol

Charge 0

This species takes part in six reactions (as a product in J002, J195, J202, J208, J213, J218).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X008} = v_{2} + v_{195} + v_{202} + v_{208} + v_{213} + v_{218} \tag{448}$$

6.11 Species X009

Name AMP

Initial amount 0 mol

Charge 0

This species takes part in six reactions (as a product in J002, J197, J203, J209, J214, J219).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X009} = v_{2} + v_{197} + v_{203} + v_{209} + v_{214} + v_{219} \tag{449}$$

6.12 Species X010

Name BCCP-biotin

Initial amount 0 mol

Charge 0

This species takes part in three reactions (as a reactant in J003 and as a product in J002, J004).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X010} = v_{2} + v_{4} - v_{3} \tag{450}$$

6.13 Species G003

Name accA3

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a modifier in J003, J196).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G003} = 0 \tag{451}$$

6.14 Species X011

Name HCO3-

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a reactant in J003).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X011} = -v_3 \tag{452}$$

6.15 Species X012

Name phosphate

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a product in J003).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X012} = v_3 \tag{453}$$

6.16 Species X013

Name BCCP-biotin-CO2

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J004 and as a product in J003).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X013} = v_3 - v_4 \tag{454}$$

6.17 Species X014

Name H+

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a product in J003).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X014} = v_3 \tag{455}$$

6.18 Species G004

Name accD3

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a modifier in J004).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G004} = 0 \tag{456}$$

6.19 Species X015

Name acetyl-CoA

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J004, J005).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X015} = -v_4 - v_5 \tag{457}$$

6.20 Species X016

Name malonyl-CoA

Initial amount 0 mol

Charge 0

This species takes part in 13 reactions (as a reactant in J006, J011, J016, J021, J026, J031, J036, J041, J046, J051, J056, J063 and as a product in J004).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X016} = v_4 - v_6 - v_{11} - v_{16} - v_{21} - v_{26} - v_{31} - v_{36} - v_{41} - v_{46} - v_{51} - v_{56} - v_{63} \tag{458}$$

6.21 Species G005

Name fas

Initial amount 0 mol

Charge 0

This species takes part in 58 reactions (as a modifier in J005, J006, J007, J008, J009, J010, J011, J012, J013, J014, J015, J016, J017, J018, J019, J020, J021, J022, J023, J024, J025, J026, J027, J028, J029, J030, J031, J032, J033, J034, J035, J036, J037, J038, J039, J040, J041, J042, J043, J044, J045, J046, J047, J048, J049, J050, J051, J052, J053, J054, J055, J056, J057, J058, J059, J060, J061, J062).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G005} = 0 \tag{459}$$

6.22 Species X017

Name ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in three reactions (as a reactant in J005 and as a product in J061, J062).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X017} = v_{61} + v_{62} - v_5 \tag{460}$$

6.23 Species X018

Name C2-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J006 and as a product in J005).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X018} = v_5 - v_6 \tag{461}$$

6.24 Species X019

Name malonyl-C2-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J007 and as a product in J006).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X019} = v_6 - v_7 \tag{462}$$

6.25 Species X020

Name beta-keto-C4-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J008 and as a product in J007).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X020} = v_7 - v_8 \tag{463}$$

6.26 Species X021

Name CO2

Initial amount 0 mol

Charge 0

This species takes part in 33 reactions (as a reactant in J196 and as a product in J007, J012, J017, J022, J027, J032, J037, J042, J047, J052, J057, J064, J070, J076, J082, J088, J094, J100, J106, J112, J118, J124, J130, J136, J142, J148, J154, J160, J166, J172, J178, J184).

$$\begin{aligned}\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X021} = {} & v_7 + v_{12} + v_{17} + v_{22} + v_{27} + v_{32} + v_{37} + v_{42} + v_{47} + v_{52} + v_{57} + v_{64} \\ & + v_{70} + v_{76} + v_{82} + v_{88} + v_{94} + v_{100} + v_{106} + v_{112} + v_{118} + v_{124} + v_{130} \\ & + v_{136} + v_{142} + v_{148} + v_{154} + v_{160} + v_{166} + v_{172} + v_{178} + v_{184} - v_{196}\end{aligned} \tag{464}$$

6.27 Species X022

Name NADPH

Initial amount 0 mol

Charge 0

This species takes part in 79 reactions (as a reactant in J008, J013, J018, J023, J028, J033, J038, J043, J048, J053, J058, J065, J066, J067, J071, J072, J073, J077, J078, J079, J083, J084, J085, J089, J090, J091, J095, J096, J097, J101, J102, J103, J107, J108, J109, J113, J114, J115, J119, J120, J121, J125, J126, J127, J131, J132, J133, J137, J138, J139, J143, J144, J145, J149, J150, J151, J155, J156, J157, J161, J162, J163, J167, J168, J169, J173, J174, J175, J179, J180, J181, J185, J186, J187 and as a product in J190, J191, J192, J211, J216).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X022} = v_{190} + v_{191} + v_{192} + v_{211} + v_{216} - v_{8} - v_{13} - v_{18} - v_{23} - v_{28} - v_{33} - v_{38} - v_{43} - v_{48} - v_{53} - v_{58} - v_{65} - v_{66} - v_{67} - v_{71} - v_{72} - v_{73} - v_{77} - v_{78} - v_{79} - v_{83} - v_{84} - v_{85} - v_{89} - v_{90} - v_{91} - v_{95} - v_{96} - v_{97} - v_{101} - v_{102} - v_{103} - v_{107} - v_{108} - v_{109} - v_{113} - v_{114} - v_{115} - v_{119} - v_{120} - v_{121} - v_{125} - v_{126} - v_{127} - v_{131} - v_{132} - v_{133} - v_{137} - v_{138} - v_{139} - v_{143} - v_{144} - v_{145} - v_{149} - v_{150} - v_{151} - v_{155} - v_{156} - v_{157} - v_{161} - v_{162} - v_{163} - v_{167} - v_{168} - v_{169} - v_{173} - v_{174} - v_{175} - v_{179} - v_{180} - v_{181} - v_{185} - v_{186} - v_{187} \tag{465}$$

6.28 Species X023

Name D-3-hydroxy-C4-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J009 and as a product in J008).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X023} = v_{8} - v_{9} \tag{466}$$

6.29 Species X024

Name NADP

Initial amount 0 mol

Charge 0

This species takes part in 79 reactions (as a reactant in J190, J191, J192, J211, J216 and as a product in J008, J013, J018, J023, J028, J033, J038, J043, J048, J053, J058, J065, J066, J067, J071, J072, J073, J077, J078, J079, J083, J084, J085, J089, J090, J091, J095, J096, J097, J101, J102, J103, J107, J108, J109, J113, J114, J115, J119, J120, J121, J125, J126, J127, J131, J132, J133, J137, J138, J139, J143, J144, J145, J149, J150, J151, J155, J156, J157, J161, J162, J163, J167, J168, J169, J173, J174, J175, J179, J180, J181, J185, J186, J187).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X024} = v_{8} + v_{13} + v_{18} + v_{23} + v_{28} + v_{33} + v_{38} + v_{43} + v_{48} + v_{53} + v_{58} + v_{65} + v_{66} + v_{67} + v_{71} + v_{72} + v_{73} + v_{77} + v_{78} + v_{79} + v_{83} + v_{84} + v_{85} + v_{89} + v_{90} + v_{91} + v_{95} + v_{96} + v_{97} + v_{101} + v_{102} + v_{103} + v_{107} + v_{108} + v_{109} + v_{113} + v_{114} + v_{115} + v_{119} + v_{120} + v_{121} + v_{125} + v_{126} + v_{127} + v_{131} + v_{132} + v_{133} + v_{137} + v_{138} + v_{139} + v_{143} + v_{144} + v_{145} + v_{149} + v_{150} + v_{151} + v_{155} + v_{156} + v_{157} + v_{161} + v_{162} + v_{163} + v_{167} + v_{168} + v_{169} + v_{173} + v_{174} + v_{175} + v_{179} + v_{180} + v_{181} + v_{185} + v_{186} + v_{187} - v_{190} - v_{191} - v_{192} - v_{211} - v_{216} \tag{467}$$

6.30 Species X025

Name trans-delta-2-enoyl-C4-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J010 and as a product in J009).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X025} = v_{9} - v_{10} \tag{468}$$

6.31 Species X026

Name H2O

Initial amount 0 mol

Charge 0

This species takes part in 32 reactions (as a product in J009, J014, J019, J024, J029, J034, J039, J044, J049, J054, J059, J068, J074, J080, J086, J092, J098, J104, J110, J116, J122, J128, J134, J140, J146, J152, J158, J164, J170, J176, J182, J188).

$$\begin{aligned}\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X026} = {} & v_{9} + v_{14} + v_{19} + v_{24} + v_{29} + v_{34} + v_{39} + v_{44} + v_{49} + v_{54} + v_{59} + v_{68} \\ & + v_{74} + v_{80} + v_{86} + v_{92} + v_{98} + v_{104} + v_{110} + v_{116} + v_{122} + v_{128} \\ & + v_{134} + v_{140} + v_{146} + v_{152} + v_{158} + v_{164} + v_{170} + v_{176} + v_{182} + v_{188}\end{aligned} \tag{469}$$

6.32 Species X027

Name NADH

Initial amount 0 mol

Charge 0

This species takes part in 32 reactions (as a reactant in J010, J015, J020, J025, J030, J035, J040, J045, J050, J055, J060, J069, J075, J081, J087, J093, J099, J105, J111, J117, J123, J129, J135, J141, J147, J153, J159, J165, J171, J177, J183, J189).

$$\begin{aligned}\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X027} = {} & -v_{10} - v_{15} - v_{20} - v_{25} - v_{30} - v_{35} - v_{40} - v_{45} - v_{50} - v_{55} - v_{60} \\ & - v_{69} - v_{75} - v_{81} - v_{87} - v_{93} - v_{99} - v_{105} - v_{111} - v_{117} - v_{123} - v_{129} \\ & - v_{135} - v_{141} - v_{147} - v_{153} - v_{159} - v_{165} - v_{171} - v_{177} - v_{183} - v_{189}\end{aligned} \tag{470}$$

6.33 Species X028

Name C4-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J011 and as a product in J010).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X028} = v_{10} - v_{11} \tag{471}$$

6.34 Species X029

Name NAD

Initial amount 0 mol

Charge 0

This species takes part in 32 reactions (as a product in J010, J015, J020, J025, J030, J035, J040, J045, J050, J055, J060, J069, J075, J081, J087, J093, J099, J105, J111, J117, J123, J129, J135, J141, J147, J153, J159, J165, J171, J177, J183, J189).

$$\begin{aligned}\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X029} = {} & v_{10} + v_{15} + v_{20} + v_{25} + v_{30} + v_{35} + v_{40} + v_{45} + v_{50} + v_{55} + v_{60} + v_{69} \\ & + v_{75} + v_{81} + v_{87} + v_{93} + v_{99} + v_{105} + v_{111} + v_{117} + v_{123} + v_{129} \\ & + v_{135} + v_{141} + v_{147} + v_{153} + v_{159} + v_{165} + v_{171} + v_{177} + v_{183} + v_{189}\end{aligned} \tag{472}$$

6.35 Species X030

Name malonyl-C4-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J012 and as a product in J011).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X030} = v_{11} - v_{12} \tag{473}$$

6.36 Species X031

Name beta-keto-C6-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J013 and as a product in J012).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X031} = v_{12} - v_{13} \tag{474}$$

6.37 Species X032

Name D-3-hydroxy-C6-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J014 and as a product in J013).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X032} = v_{13} - v_{14} \tag{475}$$

6.38 Species X033

Name trans-delta-2-enoyl-C6-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J015 and as a product in J014).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X033} = v_{14} - v_{15} \tag{476}$$

6.39 Species X034

Name C6-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J016 and as a product in J015).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X034} = v_{15} - v_{16} \tag{477}$$

6.40 Species X035

Name malonyl-C6-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J017 and as a product in J016).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X035} = v_{16} - v_{17} \tag{478}$$

6.41 Species X036

Name beta-keto-C8-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J018 and as a product in J017).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X036} = v_{17} - v_{18} \tag{479}$$

6.42 Species X037

Name D-3-hydroxy-C8-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J019 and as a product in J018).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X037} = v_{18} - v_{19} \tag{480}$$

6.43 Species X038

Name trans-delta-2-enoyl-C8-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J020 and as a product in J019).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X038} = v_{19} - v_{20} \tag{481}$$

6.44 Species X039

Name C8-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J021 and as a product in J020).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X039} = v_{20} - v_{21} \tag{482}$$

6.45 Species X040

Name malonyl-C8-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J022 and as a product in J021).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X040} = v_{21} - v_{22} \tag{483}$$

6.46 Species X041

Name beta-keto-C10-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J023 and as a product in J022).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X041} = v_{22} - v_{23} \tag{484}$$

6.47 Species X042

Name D-3-hydroxy-C10-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J024 and as a product in J023).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X042} = v_{23} - v_{24} \tag{485}$$

6.48 Species X043

Name trans-delta-2-enoyl-C10-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J025 and as a product in J024).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X043} = v_{24} - v_{25} \tag{486}$$

6.49 Species X044

Name C10-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J026 and as a product in J025).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X044} = v_{25} - v_{26} \tag{487}$$

6.50 Species X045

Name malonyl-C10-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J027 and as a product in J026).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X045} = v_{26} - v_{27} \tag{488}$$

6.51 Species X046

Name beta-keto-C12-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J028 and as a product in J027).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X046} = v_{27} - v_{28} \tag{489}$$

6.52 Species X047

Name D-3-hydroxy-C12-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J029 and as a product in J028).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X047} = v_{28} - v_{29} \tag{490}$$

6.53 Species X048

Name trans-delta-2-enoyl-C12-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J030 and as a product in J029).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X048} = v_{29} - v_{30} \tag{491}$$

6.54 Species X049

Name C12-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J031 and as a product in J030).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X049} = v_{30} - v_{31} \tag{492}$$

6.55 Species X050

Name malonyl-C12-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J032 and as a product in J031).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X050} = v_{31} - v_{32} \tag{493}$$

6.56 Species X051

Name beta-keto-C14-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J033 and as a product in J032).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X051} = v_{32} - v_{33} \tag{494}$$

6.57 Species X052

Name D-3-hydroxy-C14-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J034 and as a product in J033).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X052} = v_{33} - v_{34} \tag{495}$$

6.58 Species X053

Name trans-delta-2-enoyl-C14-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J035 and as a product in J034).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X053} = v_{34} - v_{35} \tag{496}$$

6.59 Species X054

Name C14-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J036 and as a product in J035).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X054} = v_{35} - v_{36} \tag{497}$$

6.60 Species X055

Name malonyl-C14-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J037 and as a product in J036).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X055} = v_{36} - v_{37} \tag{498}$$

6.61 Species X056

Name beta-keto-C16-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J038 and as a product in J037).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X056} = v_{37} - v_{38} \tag{499}$$

6.62 Species X057

Name D-3-hydroxy-C16-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J039 and as a product in J038).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X057} = v_{38} - v_{39} \tag{500}$$

6.63 Species X058

Name trans-delta-2-enoyl-C16-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J040 and as a product in J039).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X058} = v_{39} - v_{40} \tag{501}$$

6.64 Species X059

Name C16-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in three reactions (as a reactant in J041, J062 and as a product in J040).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X059} = v_{40} - v_{41} - v_{62} \tag{502}$$

6.65 Species X060

Name malonyl-C16-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J042 and as a product in J041).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X060} = v_{41} - v_{42} \tag{503}$$

6.66 Species X061

Name beta-keto-C18-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J043 and as a product in J042).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X061} = v_{42} - v_{43} \tag{504}$$

6.67 Species X062

Name D-3-hydroxy-C18-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J044 and as a product in J043).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X062} = v_{43} - v_{44} \tag{505}$$

6.68 Species X063

Name trans-delta-2-enoyl-C18-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J045 and as a product in J044).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X063} = v_{44} - v_{45} \tag{506}$$

6.69 Species X064

Name C18-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J046 and as a product in J045).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X064} = v_{45} - v_{46} \tag{507}$$

6.70 Species X065

Name malonyl-C18-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J047 and as a product in J046).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X065} = v_{46} - v_{47} \tag{508}$$

6.71 Species X066

Name beta-keto-C20-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J048 and as a product in J047).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X066} = v_{47} - v_{48} \tag{509}$$

6.72 Species X067

Name D-3-hydroxy-C20-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J049 and as a product in J048).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X067} = v_{48} - v_{49} \tag{510}$$

6.73 Species X068

Name trans-delta-2-enoyl-C20-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J050 and as a product in J049).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X068} = v_{49} - v_{50} \tag{511}$$

6.74 Species X069

Name C20-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J051 and as a product in J050).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X069} = v_{50} - v_{51} \tag{512}$$

6.75 Species X070

Name malonyl-C20-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J052 and as a product in J051).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X070} = v_{51} - v_{52} \tag{513}$$

6.76 Species X071

Name beta-keto-C22-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J053 and as a product in J052).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X071} = v_{52} - v_{53} \tag{514}$$

6.77 Species X072

Name D-3-hydroxy-C22-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J054 and as a product in J053).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X072} = v_{53} - v_{54} \tag{515}$$

6.78 Species X073

Name trans-delta-2-enoyl-C22-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J055 and as a product in J054).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X073} = v_{54} - v_{55} \tag{516}$$

6.79 Species X074

Name C22-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J056 and as a product in J055).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X074} = v_{55} - v_{56} \tag{517}$$

6.80 Species X075

Name malonyl-C22-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J057 and as a product in J056).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X075} = v_{56} - v_{57} \tag{518}$$

6.81 Species X076

Name beta-keto-C24-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J058 and as a product in J057).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X076} = v_{57} - v_{58} \tag{519}$$

6.82 Species X077

Name D-3-hydroxy-C24-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J059 and as a product in J058).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X077} = v_{58} - v_{59} \tag{520}$$

6.83 Species X078

Name trans-delta-2-enoyl-C24-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J060 and as a product in J059).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X078} = v_{59} - v_{60} \tag{521}$$

6.84 Species X079

Name C24-acyl-ACP-FAS

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J061 and as a product in J060).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X079} = v_{60} - v_{61} \tag{522}$$

6.85 Species X080

Name C24-acyl-S-CoA

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J196 and as a product in J061).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X080} = v_{61} - v_{196} \tag{523}$$

6.86 Species X081

Name C16-acyl-S-CoA

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J064 and as a product in J062).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X081} = v_{62} - v_{64} \tag{524}$$

6.87 Species G006

Name fabD

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a modifier in J063).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G006} = 0 \tag{525}$$

6.88 Species X082

Name malonyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in 22 reactions (as a reactant in J064, J070, J076, J082, J088, J094, J100, J106, J112, J118, J124, J130, J136, J142, J148, J154, J160, J166, J172, J178, J184 and as a product in J063).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X082} = v_{63} - v_{64} - v_{70} - v_{76} - v_{82} - v_{88} - v_{94} - v_{100} - v_{106} - v_{112} - v_{118} - v_{124} - v_{130} - v_{136} - v_{142} - v_{148} - v_{154} - v_{160} - v_{166} - v_{172} - v_{178} - v_{184} \quad (526)$$

6.89 Species G007

Name fabH

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a modifier in J064).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G007} = 0 \quad (527)$$

6.90 Species X083

Name beta-keto-C18-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J065, J066, J067 and as a product in J064).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X083} = v_{64} - v_{65} - v_{66} - v_{67} \quad (528)$$

6.91 Species G008

Name fabG1/mabA

Initial amount 0 mol

Charge 0

This species takes part in 21 reactions (as a modifier in J065, J071, J077, J083, J089, J095, J101, J107, J113, J119, J125, J131, J137, J143, J149, J155, J161, J167, J173, J179, J185).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G008} = 0 \tag{529}$$

6.92 Species X084

Name D-3-hydroxy-C18-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J068 and as a product in J065, J066, J067).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X084} = v_{65} + v_{66} + v_{67} - v_{68} \tag{530}$$

6.93 Species G009

Name fabG2

Initial amount 0 mol

Charge 0

This species takes part in 21 reactions (as a modifier in J066, J072, J078, J084, J090, J096, J102, J108, J114, J120, J126, J132, J138, J144, J150, J156, J162, J168, J174, J180, J186).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G009} = 0 \tag{531}$$

6.94 Species G010

Name fabG4

Initial amount 0 mol

Charge 0

This species takes part in 21 reactions (as a modifier in J067, J073, J079, J085, J091, J097, J103, J109, J115, J121, J127, J133, J139, J145, J151, J157, J163, J169, J175, J181, J187).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G010} = 0 \tag{532}$$

6.95 Species G011

Name UNK1

Initial amount 0 mol

Charge 0

This species takes part in 21 reactions (as a modifier in J068, J074, J080, J086, J092, J098, J104, J110, J116, J122, J128, J134, J140, J146, J152, J158, J164, J170, J176, J182, J188).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G011} = 0 \tag{533}$$

6.96 Species X085

Name trans-delta-2-enoyl-C18-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J069 and as a product in J068).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X085} = v_{68} - v_{69} \tag{534}$$

6.97 Species G012

Name inhA

Initial amount 0 mol

Charge 0

This species takes part in 21 reactions (as a modifier in J069, J075, J081, J087, J093, J099, J105, J111, J117, J123, J129, J135, J141, J147, J153, J159, J165, J171, J177, J183, J189).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G012} = 0 \tag{535}$$

6.98 Species X086

Name C18-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J070 and as a product in J069).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X086} = v_{69} - v_{70} \tag{536}$$

6.99 Species G013

Name kasA

Initial amount 0 mol

Charge 0

This species takes part in 20 reactions (as a modifier in J070, J076, J082, J088, J094, J100, J106, J112, J118, J124, J130, J136, J142, J148, J154, J160, J166, J172, J178, J184).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G013} = 0 \tag{537}$$

6.100 Species G014

Name kasB

Initial amount 0 mol

Charge 0

This species takes part in 20 reactions (as a modifier in J070, J076, J082, J088, J094, J100, J106, J112, J118, J124, J130, J136, J142, J148, J154, J160, J166, J172, J178, J184).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G014} = 0 \tag{538}$$

6.101 Species X087

Name beta-keto-C20-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J071, J072, J073 and as a product in J070).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X087} = v_{70} - v_{71} - v_{72} - v_{73} \tag{539}$$

6.102 Species X088

Name D-3-hydroxy-C20-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J074 and as a product in J071, J072, J073).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X088} = v_{71} + v_{72} + v_{73} - v_{74} \tag{540}$$

6.103 Species X089

Name trans-delta-2-enoyl-C20-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J075 and as a product in J074).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X089} = v_{74} - v_{75} \tag{541}$$

6.104 Species X090

Name C20-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J076 and as a product in J075).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X090} = v_{75} - v_{76} \tag{542}$$

6.105 Species X091

Name beta-keto-C22-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J077, J078, J079 and as a product in J076).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X091} = v_{76} - v_{77} - v_{78} - v_{79} \tag{543}$$

6.106 Species X092

Name D-3-hydroxy-C22-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J080 and as a product in J077, J078, J079).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X092} = v_{77} + v_{78} + v_{79} - v_{80} \tag{544}$$

6.107 Species X093

Name trans-delta-2-enoyl-C22-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J081 and as a product in J080).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X093} = v_{80} - v_{81} \tag{545}$$

6.108 Species X094

Name C22-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J082 and as a product in J081).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X094} = v_{81} - v_{82} \tag{546}$$

6.109 Species X095

Name beta-keto-C24-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J083, J084, J085 and as a product in J082).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X095} = v_{82} - v_{83} - v_{84} - v_{85} \tag{547}$$

6.110 Species X096

Name D-3-hydroxy-C24-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J086 and as a product in J083, J084, J085).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X096} = v_{83} + v_{84} + v_{85} - v_{86} \tag{548}$$

6.111 Species X097

Name trans-delta-2-enoyl-C24-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J087 and as a product in J086).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X097} = v_{86} - v_{87} \tag{549}$$

6.112 Species X098

Name C24-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J088 and as a product in J087).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X098} = v_{87} - v_{88} \tag{550}$$

6.113 Species X099

Name beta-keto-C26-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J089, J090, J091 and as a product in J088).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X099} = v_{88} - v_{89} - v_{90} - v_{91} \tag{551}$$

6.114 Species X100

Name D-3-hydroxy-C26-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J092 and as a product in J089, J090, J091).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X100} = v_{89} + v_{90} + v_{91} - v_{92} \tag{552}$$

6.115 Species X101

Name trans-delta-2-enoyl-C26-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J093 and as a product in J092).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X101} = v_{92} - v_{93} \tag{553}$$

6.116 Species X102

Name C26-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J094 and as a product in J093).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X102} = v_{93} - v_{94} \tag{554}$$

6.117 Species X103

Name beta-keto-C28-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J095, J096, J097 and as a product in J094).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X103} = v_{94} - v_{95} - v_{96} - v_{97} \tag{555}$$

6.118 Species X104

Name D-3-hydroxy-C28-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J098 and as a product in J095, J096, J097).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X104} = v_{95} + v_{96} + v_{97} - v_{98} \tag{556}$$

6.119 Species X105

Name trans-delta-2-enoyl-C28-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J099 and as a product in J098).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X105} = v_{98} - v_{99} \tag{557}$$

6.120 Species X106

Name C28-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J100 and as a product in J099).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X106} = v_{99} - v_{100} \tag{558}$$

6.121 Species X107

Name beta-keto-C30-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J101, J102, J103 and as a product in J100).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X107} = v_{100} - v_{101} - v_{102} - v_{103} \tag{559}$$

6.122 Species X108

Name D-3-hydroxy-C30-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J104 and as a product in J101, J102, J103).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X108} = v_{101} + v_{102} + v_{103} - v_{104} \tag{560}$$

6.123 Species X109

Name trans-delta-2-enoyl-C30-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J105 and as a product in J104).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X109} = v_{104} - v_{105} \tag{561}$$

6.124 Species X110

Name C30-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J106 and as a product in J105).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X110} = v_{105} - v_{106} \tag{562}$$

6.125 Species X111

Name beta-keto-C32-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J107, J108, J109 and as a product in J106).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X111} = v_{106} - v_{107} - v_{108} - v_{109} \tag{563}$$

6.126 Species X112

Name D-3-hydroxy-C32-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J110 and as a product in J107, J108, J109).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X112} = v_{107} + v_{108} + v_{109} - v_{110} \tag{564}$$

6.127 Species X113

Name trans-delta-2-enoyl-C32-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J111 and as a product in J110).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X113} = v_{110} - v_{111} \tag{565}$$

6.128 Species X114

Name C32-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J112 and as a product in J111).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X114} = v_{111} - v_{112} \tag{566}$$

6.129 Species X115

Name beta-keto-C34-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J113, J114, J115 and as a product in J112).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X115} = v_{112} - v_{113} - v_{114} - v_{115} \tag{567}$$

6.130 Species X116

Name D-3-hydroxy-C34-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J116 and as a product in J113, J114, J115).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X116} = v_{113} + v_{114} + v_{115} - v_{116} \tag{568}$$

6.131 Species X117

Name trans-delta-2-enoyl-C34-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J117 and as a product in J116).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X117} = v_{116} - v_{117} \tag{569}$$

6.132 Species X118

Name C34-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J118 and as a product in J117).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X118} = v_{117} - v_{118} \tag{570}$$

6.133 Species X119

Name beta-keto-C36-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J119, J120, J121 and as a product in J118).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X119} = v_{118} - v_{119} - v_{120} - v_{121} \tag{571}$$

6.134 Species X120

Name D-3-hydroxy-C36-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J122 and as a product in J119, J120, J121).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X120} = v_{119} + v_{120} + v_{121} - v_{122} \tag{572}$$

6.135 Species X121

Name trans-delta-2-enoyl-C36-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J123 and as a product in J122).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X121} = v_{122} - v_{123} \tag{573}$$

6.136 Species X122

Name C36-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J124 and as a product in J123).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X122} = v_{123} - v_{124} \tag{574}$$

6.137 Species X123

Name beta-keto-C38-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J125, J126, J127 and as a product in J124).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X123} = v_{124} - v_{125} - v_{126} - v_{127} \tag{575}$$

6.138 Species X124

Name D-3-hydroxy-C38-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J128 and as a product in J125, J126, J127).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X124} = v_{125} + v_{126} + v_{127} - v_{128} \tag{576}$$

6.139 Species X125

Name trans-delta-2-enoyl-C38-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J129 and as a product in J128).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X125} = v_{128} - v_{129} \tag{577}$$

6.140 Species X126

Name C38-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J130 and as a product in J129).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X126} = v_{129} - v_{130} \tag{578}$$

6.141 Species X127

Name beta-keto-C40-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J131, J132, J133 and as a product in J130).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X127} = v_{130} - v_{131} - v_{132} - v_{133} \tag{579}$$

6.142 Species X128

Name D-3-hydroxy-C40-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J134 and as a product in J131, J132, J133).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X128} = v_{131} + v_{132} + v_{133} - v_{134} \tag{580}$$

6.143 Species X129

Name trans-delta-2-enoyl-C40-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J135 and as a product in J134).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X129} = v_{134} - v_{135} \tag{581}$$

6.144 Species X130

Name C40-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J136 and as a product in J135).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X130} = v_{135} - v_{136} \tag{582}$$

6.145 Species X131

Name beta-keto-C42-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J137, J138, J139 and as a product in J136).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X131} = v_{136} - v_{137} - v_{138} - v_{139} \tag{583}$$

6.146 Species X132

Name D-3-hydroxy-C42-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J140 and as a product in J137, J138, J139).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X132} = v_{137} + v_{138} + v_{139} - v_{140} \tag{584}$$

6.147 Species X133

Name trans-delta-2-enoyl-C42-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J141 and as a product in J140).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X133} = v_{140} - v_{141} \tag{585}$$

6.148 Species X134

Name C42-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J142 and as a product in J141).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X134} = v_{141} - v_{142} \tag{586}$$

6.149 Species X135

Name beta-keto-C44-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J143, J144, J145 and as a product in J142).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X135} = v_{142} - v_{143} - v_{144} - v_{145} \tag{587}$$

6.150 Species X136

Name D-3-hydroxy-C44-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J146 and as a product in J143, J144, J145).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X136} = v_{143} + v_{144} + v_{145} - v_{146} \tag{588}$$

6.151 Species X137

Name trans-delta-2-enoyl-C44-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J147 and as a product in J146).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X137} = v_{146} - v_{147} \tag{589}$$

6.152 Species X138

Name C44-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J148 and as a product in J147).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X138} = v_{147} - v_{148} \tag{590}$$

6.153 Species X139

Name beta-keto-C46-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J149, J150, J151 and as a product in J148).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X139} = v_{148} - v_{149} - v_{150} - v_{151} \tag{591}$$

6.154 Species X140

Name D-3-hydroxy-C46-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J152 and as a product in J149, J150, J151).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X140} = v_{149} + v_{150} + v_{151} - v_{152} \tag{592}$$

6.155 Species X141

Name trans-delta-2-enoyl-C46-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J153 and as a product in J152).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X141} = v_{152} - v_{153} \tag{593}$$

6.156 Species X142

Name C46-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J154 and as a product in J153).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X142} = v_{153} - v_{154} \tag{594}$$

6.157 Species X143

Name beta-keto-C48-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J155, J156, J157 and as a product in J154).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X143} = v_{154} - v_{155} - v_{156} - v_{157} \tag{595}$$

6.158 Species X144

Name D-3-hydroxy-C48-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J158 and as a product in J155, J156, J157).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X144} = v_{155} + v_{156} + v_{157} - v_{158} \tag{596}$$

6.159 Species X145

Name trans-delta-2-enoyl-C48-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J159 and as a product in J158).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X145} = v_{158} - v_{159} \tag{597}$$

6.160 Species X146

Name C48-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J160 and as a product in J159).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X146} = v_{159} - v_{160} \tag{598}$$

6.161 Species X147

Name beta-keto-C50-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J161, J162, J163 and as a product in J160).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X147} = v_{160} - v_{161} - v_{162} - v_{163} \tag{599}$$

6.162 Species X148

Name D-3-hydroxy-C50-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J164 and as a product in J161, J162, J163).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X148} = v_{161} + v_{162} + v_{163} - v_{164} \tag{600}$$

6.163 Species X149

Name trans-delta-2-enoyl-C50-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J165 and as a product in J164).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X149} = v_{164} - v_{165} \tag{601}$$

6.164 Species X150

Name C50-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J166 and as a product in J165).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X150} = v_{165} - v_{166} \tag{602}$$

6.165 Species X151

Name beta-keto-C52-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J167, J168, J169 and as a product in J166).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X151} = v_{166} - v_{167} - v_{168} - v_{169} \tag{603}$$

6.166 Species X152

Name D-3-hydroxy-C52-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J170 and as a product in J167, J168, J169).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X152} = v_{167} + v_{168} + v_{169} - v_{170} \tag{604}$$

6.167 Species X153

Name trans-delta-2-enoyl-C52-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J171 and as a product in J170).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X153} = v_{170} - v_{171} \tag{605}$$

6.168 Species X154

Name C52-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in three reactions (as a reactant in J172, J190 and as a product in J171).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X154} = v_{171} - v_{172} - v_{190} \tag{606}$$

6.169 Species X155

Name beta-keto-C54-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J173, J174, J175 and as a product in J172).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X155} = v_{172} - v_{173} - v_{174} - v_{175} \tag{607}$$

6.170 Species X156

Name D-3-hydroxy-C54-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J176 and as a product in J173, J174, J175).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X156} = v_{173} + v_{174} + v_{175} - v_{176} \tag{608}$$

6.171 Species X157

Name trans-delta-2-enoyl-C54-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J177 and as a product in J176).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X157} = v_{176} - v_{177} \tag{609}$$

6.172 Species X158

Name C54-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in three reactions (as a reactant in J178, J191 and as a product in J177).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X158} = v_{177} - v_{178} - v_{191} \tag{610}$$

6.173 Species X159

Name beta-keto-C56-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J179, J180, J181 and as a product in J178).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X159} = v_{178} - v_{179} - v_{180} - v_{181} \tag{611}$$

6.174 Species X160

Name D-3-hydroxy-C56-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J182 and as a product in J179, J180, J181).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X160} = v_{179} + v_{180} + v_{181} - v_{182} \tag{612}$$

6.175 Species X161

Name trans-delta-2-enoyl-C56-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J183 and as a product in J182).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X161} = v_{182} - v_{183} \tag{613}$$

6.176 Species X162

Name C56-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J184 and as a product in J183).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X162} = v_{183} - v_{184} \tag{614}$$

6.177 Species X163

Name beta-keto-C58-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J185, J186, J187 and as a product in J184).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X163} = v_{184} - v_{185} - v_{186} - v_{187} \tag{615}$$

6.178 Species X164

Name D-3-hydroxy-C58-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in four reactions (as a reactant in J188 and as a product in J185, J186, J187).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X164} = v_{185} + v_{186} + v_{187} - v_{188} \tag{616}$$

6.179 Species X165

Name trans-delta-2-enoyl-C58-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J189 and as a product in J188).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X165} = v_{188} - v_{189} \tag{617}$$

6.180 Species X166

Name C58-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J192 and as a product in J189).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X166} = v_{189} - v_{192} \tag{618}$$

6.181 Species G015

Name desA1

Initial amount 0 mol

Charge 0

This species takes part in three reactions (as a modifier in J190, J191, J192).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G015} = 0 \tag{619}$$

6.182 Species G016

Name desA2

Initial amount 0 mol

Charge 0

This species takes part in three reactions (as a modifier in J190, J191, J192).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G016} = 0 \tag{620}$$

6.183 Species G017

Name desA3

Initial amount 0 mol

Charge 0

This species takes part in three reactions (as a modifier in J190, J191, J192).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G017} = 0 \tag{621}$$

6.184 Species X167

Name cis-delta-2-19,31-enoyl-C52-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J193 and as a product in J190).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X167} = v_{190} - v_{193} \tag{622}$$

6.185 Species X168

Name cis-delta-2-19,37-enoyl-C54-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in three reactions (as a reactant in J198, J204 and as a product in J191).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X168} = v_{191} - v_{198} - v_{204} \tag{623}$$

6.186 Species X169

Name cis-delta-2-19,37-enoyl-C58-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J210 and as a product in J192).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X169} = v_{192} - v_{210} \tag{624}$$

6.187 Species G018

Name mmaA2

Initial amount 0 mol

Charge 0

This species takes part in three reactions (as a modifier in J193, J200, J212).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G018} = 0 \tag{625}$$

6.188 Species X170

Name S-adenosyl-L-methionine

Initial amount 0 mol

Charge 0

This species takes part in 14 reactions (as a reactant in J193, J194, J198, J199, J200, J201, J204, J205, J206, J207, J210, J212, J215, J217).

$$\begin{aligned}\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X170} = &-v_{193} - v_{194} - v_{198} - v_{199} - v_{200} - v_{201} - v_{204} \\ &- v_{205} - v_{206} - v_{207} - v_{210} - v_{212} - v_{215} - v_{217}\end{aligned} \tag{626}$$

6.189 Species X171

Name cis-delta-1-31-enoyl-19-cp-C53-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J194 and as a product in J193).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X171} = v_{193} - v_{194} \tag{627}$$

6.190 Species X172

Name S-adenosyl-L-homocysteine

Initial amount 0 mol

Charge 0

This species takes part in 14 reactions (as a product in J193, J194, J198, J199, J200, J201, J204, J205, J206, J207, J210, J212, J215, J217).

$$\begin{aligned}\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X172} = {} & v_{193} + v_{194} + v_{198} + v_{199} + v_{200} + v_{201} + v_{204} \\ & + v_{205} + v_{206} + v_{207} + v_{210} + v_{212} + v_{215} + v_{217}\end{aligned} \tag{628}$$

6.191 Species G019

Name pcaA

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a modifier in J194).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G019} = 0 \tag{629}$$

6.192 Species X173

Name 19,31-cp-C54-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J195 and as a product in J194).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X173} = v_{194} - v_{195} \tag{630}$$

6.193 Species G020

Name fadD32

Initial amount 0 mol

Charge 0

This species takes part in five reactions (as a modifier in J195, J202, J208, J213, J218).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G020} = 0 \tag{631}$$

6.194 Species X174

Name 19,31-cp-C54-acyl-ACP-AMP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J197 and as a product in J195).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X174} = v_{195} - v_{197} \tag{632}$$

6.195 Species G021

Name accD4

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a modifier in J196).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G021} = 0 \tag{633}$$

6.196 Species G022

Name accD5

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a modifier in J196).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G022} = 0 \tag{634}$$

6.197 Species X175

Name 2-carboxyl-C24-acyl-CoA

Initial amount 0 mol

Charge 0

This species takes part in six reactions (as a reactant in J197, J203, J209, J214, J219 and as a product in J196).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X175} = v_{196} - v_{197} - v_{203} - v_{209} - v_{214} - v_{219} \tag{635}$$

6.198 Species G023

Name pks13

Initial amount 0 mol

Charge 0

This species takes part in five reactions (as a modifier in J197, J203, J209, J214, J219).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G023} = 0 \tag{636}$$

6.199 Species X176

Name alpha-mycolate

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a product in J197).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X176} = v_{197} \tag{637}$$

6.200 Species G024

Name mmaA4

Initial amount 0 mol

Charge 0

This species takes part in three reactions (as a modifier in J198, J205, J210).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G024} = 0 \tag{638}$$

6.201 Species X177

Name cis-delta-37-methyl-hydroxy-C55-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J199 and as a product in J198).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X177} = v_{198} - v_{199} \tag{639}$$

6.202 Species G025

Name mmaA3

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a modifier in J199, J206).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G025} = 0 \tag{640}$$

6.203 Species X178

Name cis-delta-37-methyl-hydroxymethyl-C56-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in three reactions (as a reactant in J200, J201 and as a product in J199).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X178} = v_{199} - v_{200} - v_{201} \tag{641}$$

6.204 Species X179

Name cis-methoxy-C57-meroacyl-cp-ACP

Initial amount 0 mol

Charge 0

This species takes part in three reactions (as a reactant in J202 and as a product in J200, J201).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X179} = v_{200} + v_{201} - v_{202} \tag{642}$$

6.205 Species G026

Name cmaA2

Initial amount 0 mol

Charge 0

This species takes part in three reactions (as a modifier in J201, J207, J217).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G026} = 0 \tag{643}$$

6.206 Species X180

Name cis-methoxy-C57-meroacyl-cp-ACP-AMP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J203 and as a product in J202).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X180} = v_{202} - v_{203} \tag{644}$$

6.207 Species X181

Name cis-methoxy-mycolate

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a product in J203).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X181} = v_{203} \tag{645}$$

6.208 Species G027

Name mmaA1

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a modifier in J204, J215).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G027} = 0 \tag{646}$$

6.209 Species X182

Name delta-2-cis-19,trans-37-enoyl-methyl-C55-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J205 and as a product in J204).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X182} = v_{204} - v_{205} \tag{647}$$

6.210 Species X183

Name trans-delta-37-methyl-hydroxy-C56-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J206 and as a product in J205).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X183} = v_{205} - v_{206} \tag{648}$$

6.211 Species X184

Name trans-delta-37-methyl-hydroxymethyl-C57-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J207 and as a product in J206).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X184} = v_{206} - v_{207} \tag{649}$$

6.212 Species X185

Name trans-methoxy-C58-meroacyl-cp-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J208 and as a product in J207).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X185} = v_{207} - v_{208} \tag{650}$$

6.213 Species X186

Name trans-methoxy-C58-meroacyl-cp-ACP-AMP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J209 and as a product in J208).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X186} = v_{208} - v_{209} \tag{651}$$

6.214 Species X187

Name trans-methoxy-mycolate

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a product in J209).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X187} = v_{209} \tag{652}$$

6.215 Species X188

Name cis-delta-37-methyl-hydroxy-C59-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in three reactions (as a reactant in J211, J215 and as a product in J210).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X188} = v_{210} - v_{211} - v_{215} \tag{653}$$

6.216 Species G028

Name UNK2

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a modifier in J211, J216).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{G028} = 0 \tag{654}$$

6.217 Species X189

Name cis-delta-37-methyl-keto-C59-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J212 and as a product in J211).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X189} = v_{211} - v_{212} \tag{655}$$

6.218 Species X190

Name cis-keto-C60-meroacyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J213 and as a product in J212).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X190} = v_{212} - v_{213} \tag{656}$$

6.219 Species X191

Name cis-keto-C60-meroacyl-ACP-AMP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J214 and as a product in J213).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X191} = v_{213} - v_{214} \tag{657}$$

6.220 Species X192

Name cis-keto-mycolate

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a product in J214).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X192} = v_{214} \tag{658}$$

6.221 Species X193

Name trans-delta-37-methyl-hydroxy-C60-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J216 and as a product in J215).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X193} = v_{215} - v_{216} \tag{659}$$

6.222 Species X194

Name trans-delta-37-methyl-keto-C60-acyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J217 and as a product in J216).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X194} = v_{216} - v_{217} \tag{660}$$

6.223 Species X195

Name trans-keto-C61-meroacyl-ACP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J218 and as a product in J217).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X195} = v_{217} - v_{218} \tag{661}$$

6.224 Species X196

Name trans-keto-C61-meroacyl-ACP-AMP

Initial amount 0 mol

Charge 0

This species takes part in two reactions (as a reactant in J219 and as a product in J218).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X196} = v_{218} - v_{219} \tag{662}$$

6.225 Species X197

Name trans-keto-mycolate

Initial amount 0 mol

Charge 0

This species takes part in one reaction (as a product in J219).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{X197} = v_{219} \tag{663}$$

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