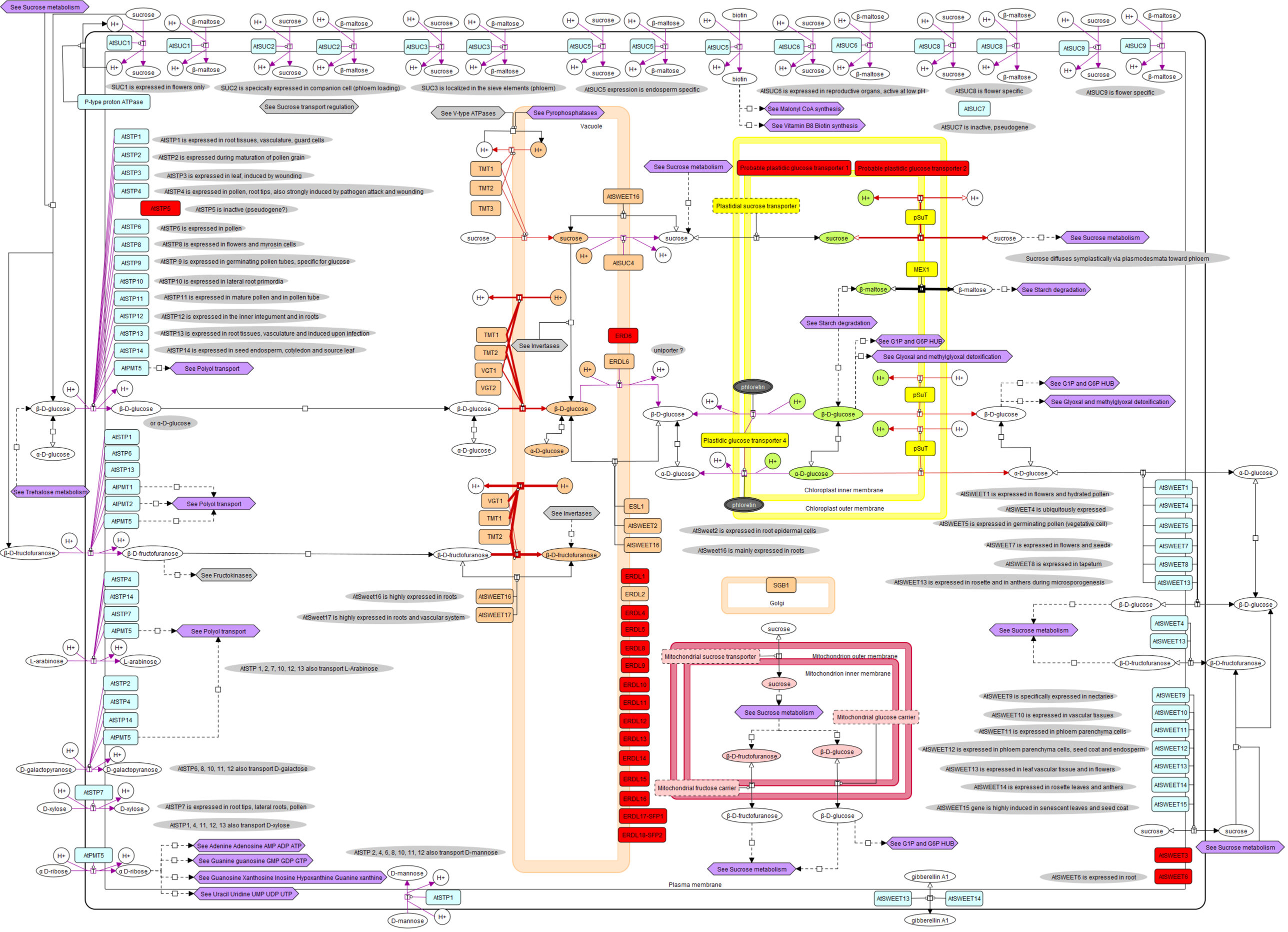
See Sucrose metabolism
sucrose
β-maltose
AtSUC1
AtSUC2
AtSUC3
AtSUC5
biotin
AtSUC6
AtSUC8
AtSUC9
SUC1 is expressed in flowers only
SUC2 is specically expressed in companion cell (phloem loading)
SUC3 is localized in the sieve elements (phloem)
AtSUC5 expression is endosperm specific
AtSUC6 is expressed in reproductive organs, active at low pH
AtSUC8 is flower specific
AtSUC9 is flower specific
P-type proton ATPase
See Sucrose transport regulation
See V-type ATPases
See Pyrophosphatases
Vacuole
See Malonyl CoA synthesis
See Vitamin B8 Biotin synthesis
AtSUC7
AtSUC7 is inactive, pseudogene
AtSTP1
AtSTP2
AtSTP3
AtSTP4
AtSTP5
AtSTP6
AtSTP8
AtSTP9
AtSTP10
AtSTP11
AtSTP12
AtSTP13
AtSTP14
AtPMT5
AtSTP1 is expressed in root tissues, vasculature, guard cells
AtSTP2 is expressed during maturation of pollen grain
AtSTP3 is expressed in leaf, induced by wounding
AtSTP4 is expressed in pollen, root tips, also strongly induced by pathogen attack and wounding
AtSTP5 is inactive (pseudogene?)
AtSTP6 is expressed in pollen
AtSTP8 is expressed in flowers and myrosin cells
AtSTP 9 is expressed in germinating pollen tubes, specific for glucose
AtSTP10 is expressed in lateral root primordia
AtSTP11 is expressed in mature pollen and in pollen tube
AtSTP12 is expressed in the inner integument and in roots
AtSTP13 is expressed in root tissues, vasculature and induced upon infection
AtSTP14 is expressed in seed endosperm, cotyledon and source leaf
See Polyol transport
TMT1
TMT2
TMT3
VGT1
VGT2
AtSWEET16
AtSUC4
See Invertases
ERD6
ERDL6
uniporter ?
ESL1
AtSWEET2
AtSWEET16
ERDL1
ERDL2
ERDL4
ERDL5
ERDL8
ERDL9
ERDL10
ERDL11
ERDL12
ERDL13
ERDL14
ERDL15
ERDL16
ERDL17-SFP1
ERDL18-SFP2
AtSWEET16
AtSWEET17
AtSweet16 is highly expressed in roots
AtSweet17 is highly expressed in roots and vascular system
See Sucrose metabolism
Probable plastidic glucose transporter 1
Probable plastidic glucose transporter 2
Plastidial sucrose transporter
pSuT
MEX1
β-maltose
See Starch degradation
See G1P and G6P HUB
See Glyoxal and methylglyoxal detoxification
Sucrose diffuses symplastically via plasmodesmata toward phloem
phloretin
Plastidic glucose transporter 4
Chloroplast inner membrane
Chloroplast outer membrane
AtSweet2 is expressed in root epidermal cells
AtSweet16 is mainly expressed in roots
SGB1
Golgi
Mitochondrial sucrose transporter
Mitochondrion outer membrane
Mitochondrion inner membrane
Mitochondrial glucose carrier
Mitochondrial fructose carrier
Plasma membrane
AtSWEET1 is expressed in flowers and hydrated pollen
AtSWEET4 is ubiquitously expressed
AtSWEET5 is expressed in germinating pollen (vegetative cell)
AtSWEET7 is expressed in flowers and seeds
AtSWEET8 is expressed in tapetum
AtSWEET13 is expressed in rosette and in anthers during microsporogenesis
AtSWEET9 is specically expressed in nectaries
AtSWEET10 is expressed in vascular tissues
AtSWEET11 is expressed in phloem parenchyma cells
AtSWEET12 is expressed in phloem parenchyma cells, seed coat and endosperm
AtSWEET13 is expressed in leaf vascular tissue and in flowers
AtSWEET14 is expressed in rosette leaves and anthers
AtSWEET15 gene is highly induced in senescent leaves and seed coat
AtSWEET6 is expressed in root
AtSWEET1
AtSWEET4
AtSWEET5
AtSWEET7
AtSWEET8
AtSWEET13
AtSWEET9
AtSWEET10
AtSWEET11
AtSWEET12
AtSWEET13
AtSWEET14
AtSWEET15
AtSWEET3
AtSWEET6
gibberellin A1
AtSWEET13
AtSWEET14
gibberellin A1
β-D-glucose
α-D-glucose
β-D-fructofuranose
L-arabinose
D-galactopyranose
D-xylose
α D-ribose
D-mannose
See Trehalose metabolism
See Fructokinases
See Adenine Adenosine AMP ADP ATP
See Guanine guanosine GMP GDP GTP
See Guanosine Xanthosine Inosine Hypoxanthine Guanine xanthine
See Uracil Uridine UMP UDP UTP
AtSTP1
AtSTP6
AtSTP13
AtPMT1
AtPMT2
AtSTP4
AtSTP14
AtSTP7
AtSTP2
AtPMT5
AtSTP1, 2, 7, 10, 12, 13 also transport L-Arabinose
AtSTP6, 8, 10, 11, 12 also transport D-galactose
AtSTP7 is expressed in root tips, lateral roots, pollen
AtSTP1, 4, 11, 12, 13 also transport D-xylose
AtSTP 2, 4, 6, 8, 10, 11, 12 also transport D-mannose
or α-D-glucose