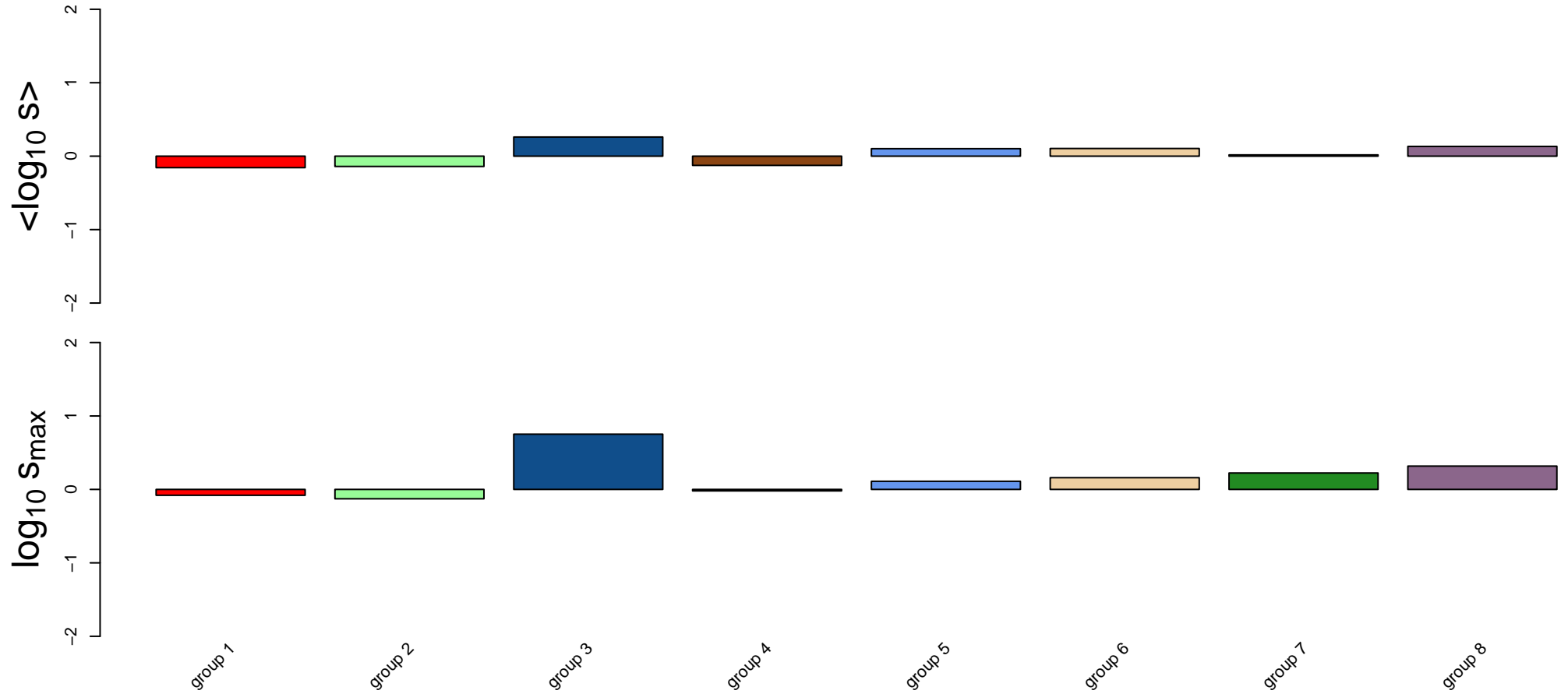
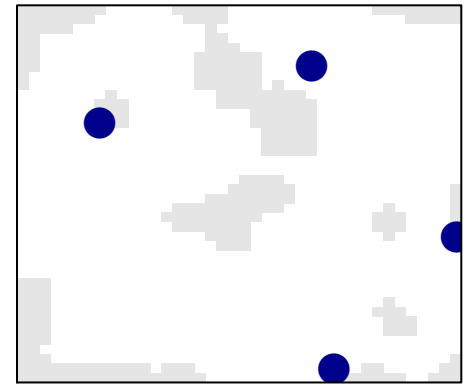
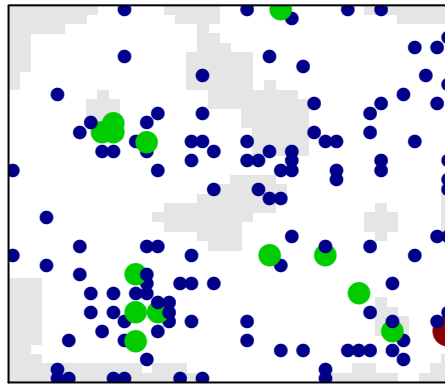


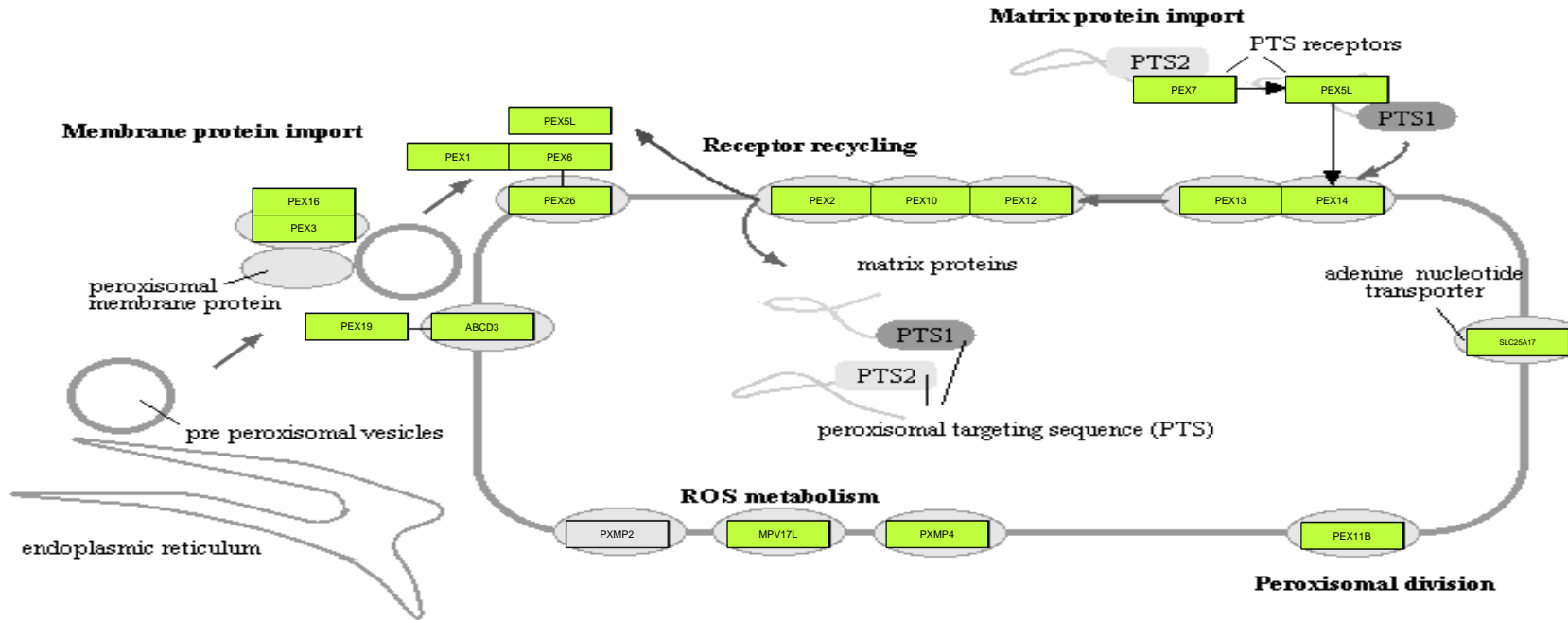
Peroxisome

all genes

sink node genes



## Peroxisome biogenesis



## Peroxisomal proteins

### fatty acid-oxidation

#### α-oxidation

matrix proteins  
(PTS1 type) (PTS2 type)

HACL1 PHYH

Fatty acid  
degradation

#### β-oxidation

AMACR

ACOX1

HSD17B4

SCP2

BAAT

PPAR  
signaling pathway

Primary bile acid  
biosynthesis

EHHADH

ACAA1

(PTS2 type)

#### unsaturated fatty acid β-oxidation

(PTS1 type) membrane proteins

DECR2

ECH1

ABCD1

ACSL1

SLC27A2

#### other-oxidation (PTS1 type)

PECR

ACOT8

ECI2

CRAT

NUDT7

CROT

NUDT12

MLYCD

NUDT19

### etherphospholipidbiosynthesis

#### matrix proteins

(PTS1 type)

GNPAT

Glycerophospholipid  
metabolism

(PTS2 type)

AGPS

Ether lipid  
metabolism

#### membrane proteins

FAR2

### sterol precursor biosynthesis

(PTS2 type)

MVK

PMVK

Terpenoid backbone  
biosynthesis

### amino acid metabolism (PTS1 type)

AGXT

PAOX

DAO

PIPOX

DDO

HMGCL

IDH1

HAO2

### antioxidant system

hydrogen peroxide metabolism  
(PTS1 type)

CAT

PRDX5

SOD1

PRDX1

NOS2

#### epoxide metabolism

EPHX2

#### glutathione metabolism

GSTK1

### purine metabolism

XDH

Purine  
metabolism

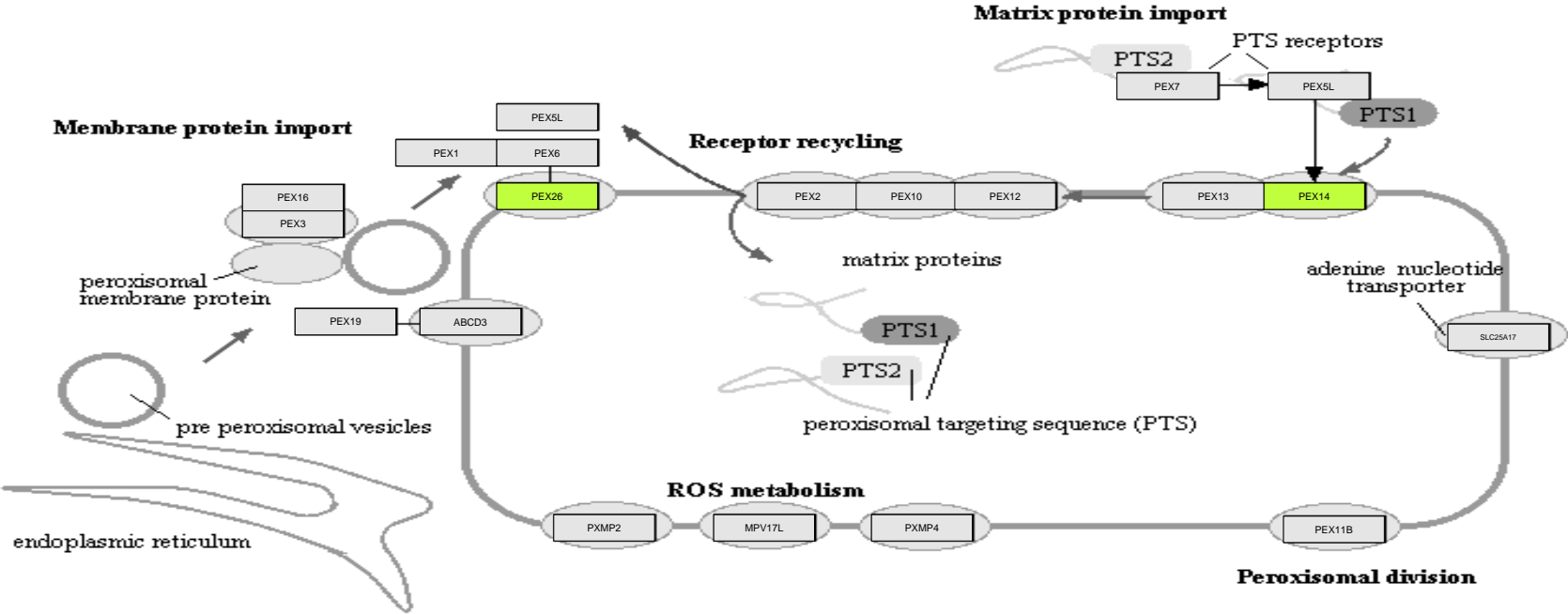
### retinol metabolism

DHRS4

Retinol  
metabolism

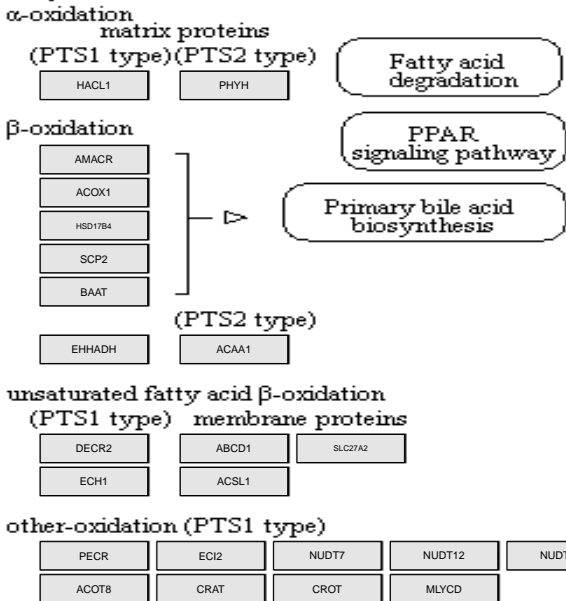
Peroxisome sink nodes

**Peroxisome biogenesis**

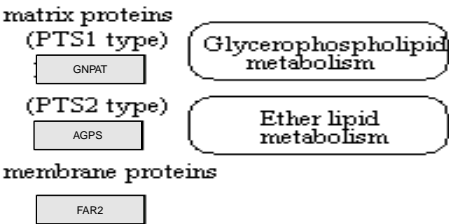


**Peroxisomal proteins**

**fatty acid-oxidation**



**etherphospholipid biosynthesis**



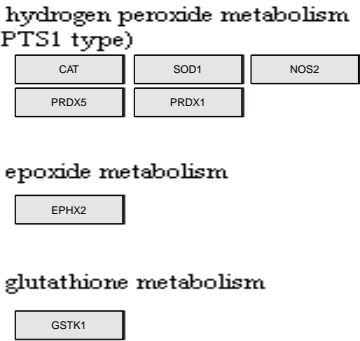
**sterol precursor biosynthesis**



**amino acid metabolism (PTS1 type)**



**antioxidant system**



**purine metabolism**

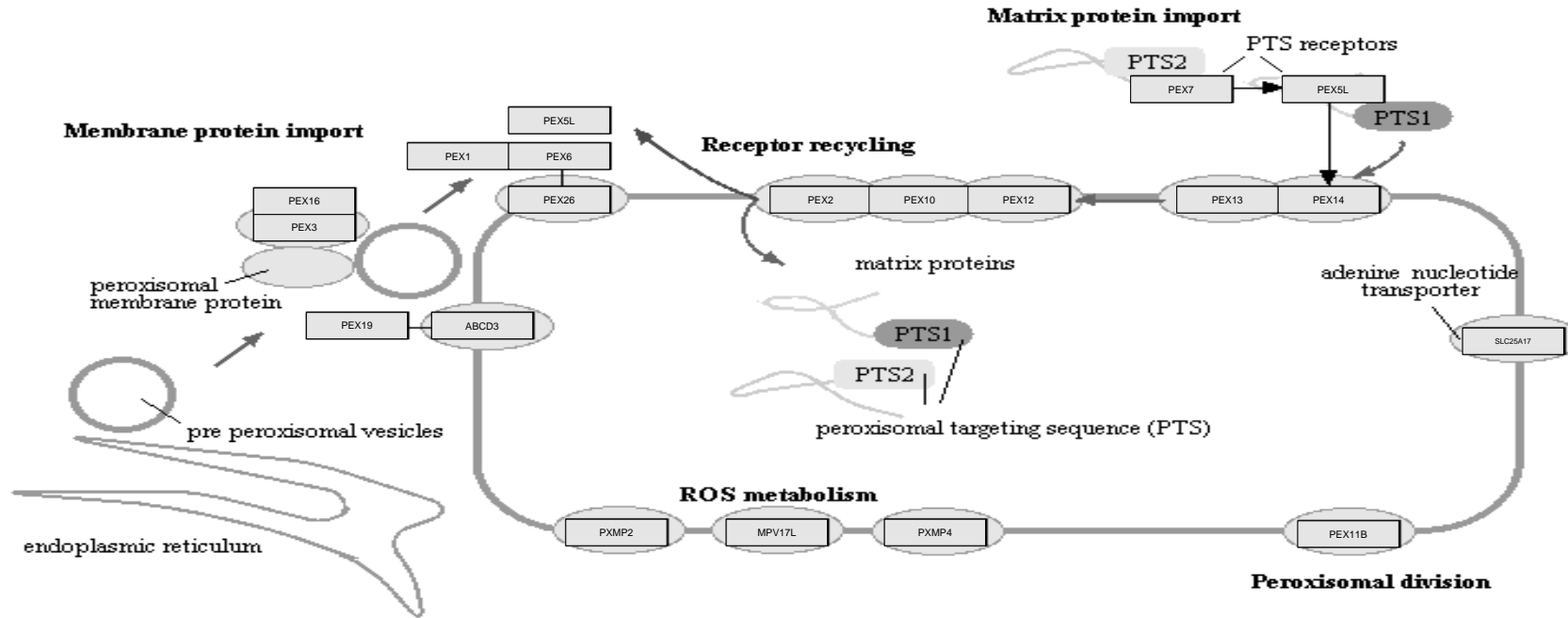


**retinol metabolism**



Peroxisome  
influencer genes

## Peroxisome biogenesis



## Peroxisomal proteins

### fatty acid-oxidation

#### α-oxidation

matrix proteins  
(PTS1 type) (PTS2 type)

HACL1 PHYH

Fatty acid  
degradation

#### β-oxidation

AMACR  
ACOX1  
HSD17B4  
SCP2  
BAAT

PPAR  
signaling pathway

Primary bile acid  
biosynthesis

(PTS2 type)  
EHHADH ACAA1

#### unsaturated fatty acid β-oxidation

(PTS1 type) membrane proteins

DECR2 ABCD1 SLC27A2

ECH1 ACSL1

#### other-oxidation (PTS1 type)

PECR EC12 NUDT7 NUDT12 NUDT19

ACOT8 CRAT CROT MLYCD

### etherphospholipidbiosynthesis

matrix proteins

(PTS1 type)

GNPAT

Glycerophospholipid  
metabolism

(PTS2 type)

AGPS

Ether lipid  
metabolism

membrane proteins

FAR2

### sterol precursor biosynthesis

(PTS2 type)

MVK

PMVK

Terpenoid backbone  
biosynthesis

### amino acid metabolism (PTS1 type)

AGXT DAO DDO IDH1

PAOX PIPOX HMGCL HAO2

### antioxidant system

hydrogen peroxide metabolism  
(PTS1 type)

CAT SOD1 NOS2

PRDX5 PRDX1

### epoxide metabolism

EPHX2

### glutathione metabolism

GSTK1

### purine metabolism

XDH

Purine  
metabolism

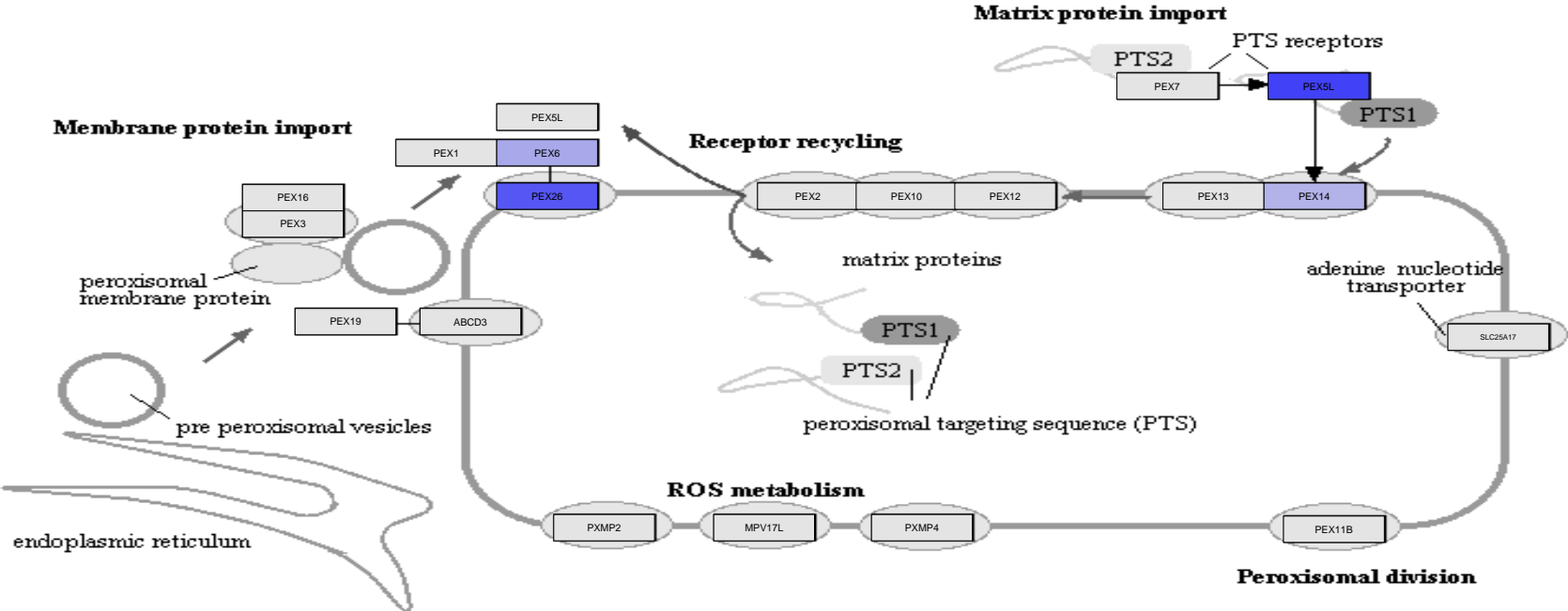
### retinol metabolism

DHRS4

Retinol  
metabolism

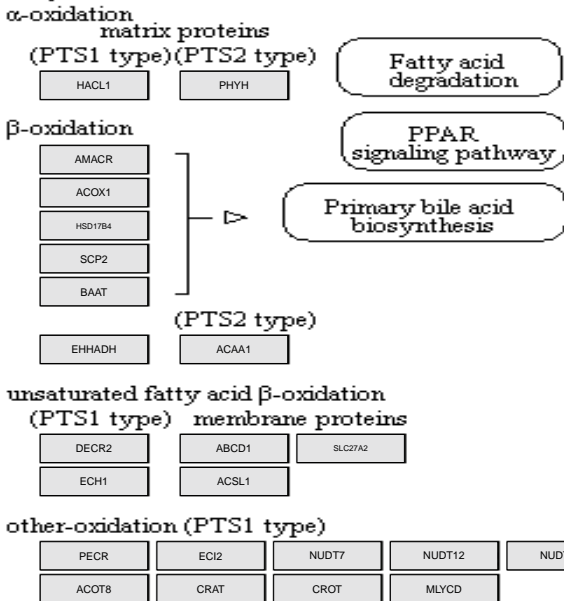
Peroxisome group 1

**Peroxisome biogenesis**

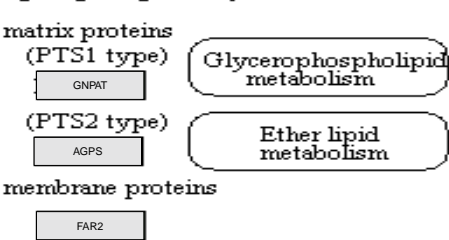


**Peroxisomal proteins**

**fatty acid-oxidation**



**etherphospholipidbiosynthesis**



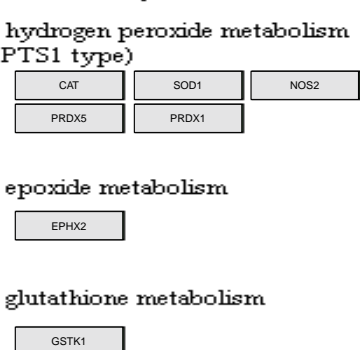
**sterol precursor biosynthesis**



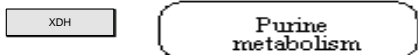
**amino acid metabolism (PTS1 type)**



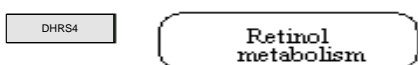
**antioxidant system**



**purine metabolism**

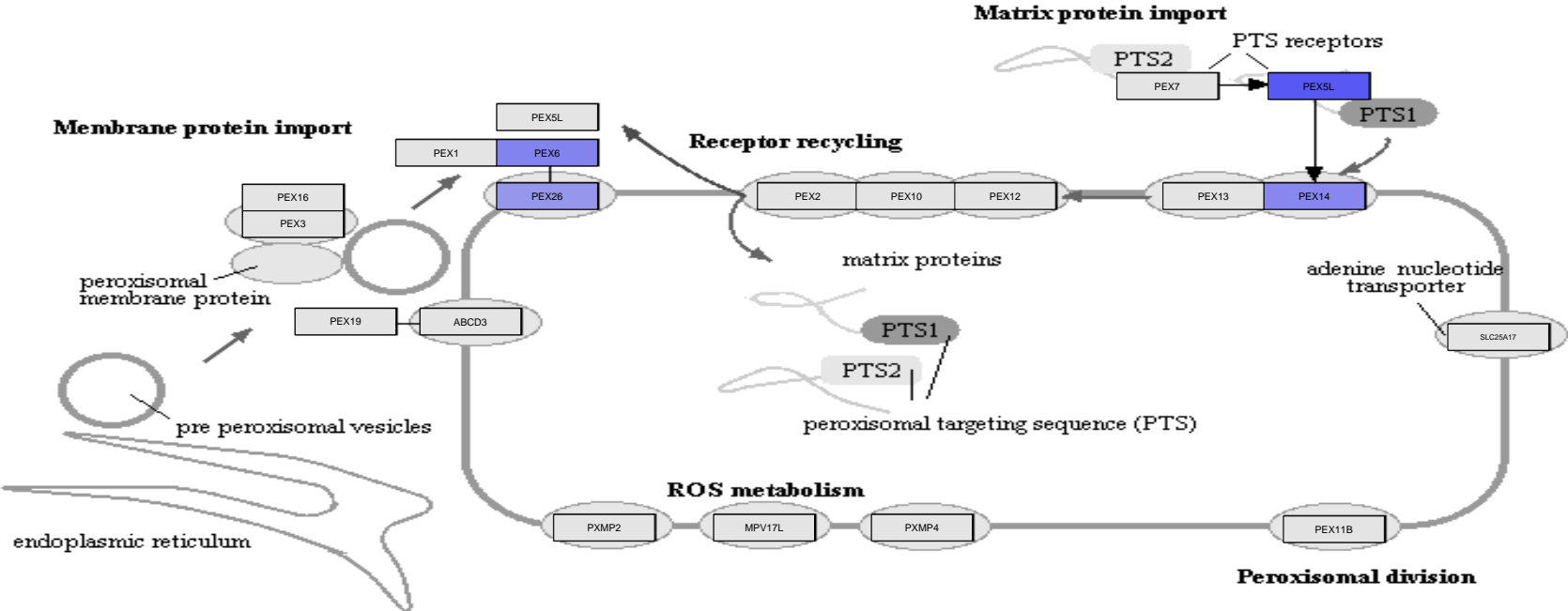


**retinol metabolism**



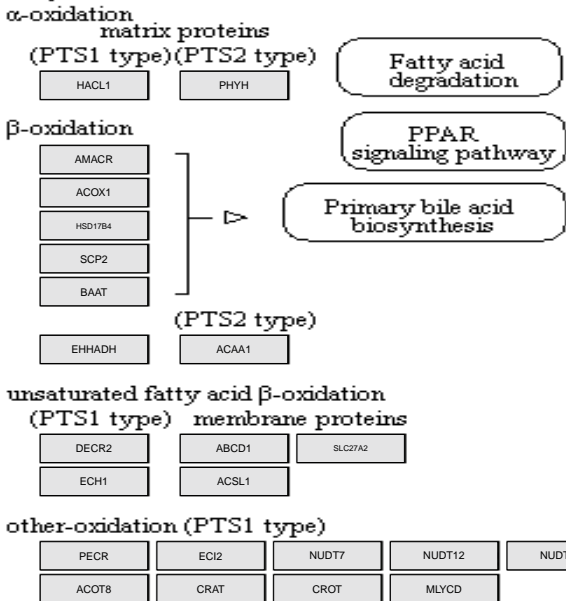
Peroxisome group 2

**Peroxisome biogenesis**

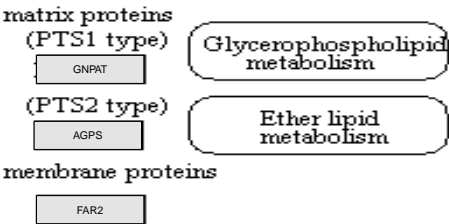


**Peroxisomal proteins**

**fatty acid-oxidation**



**etherphospholipidbiosynthesis**



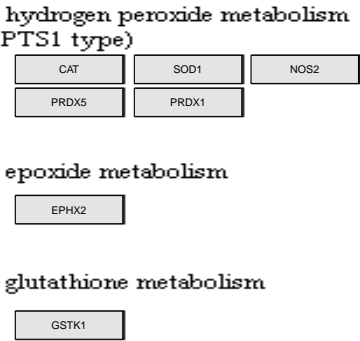
**sterol precursor biosynthesis**



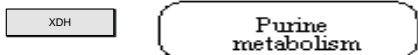
**amino acid metabolism (PTS1 type)**



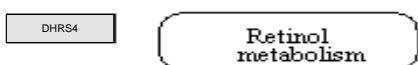
**antioxidant system**



**purine metabolism**

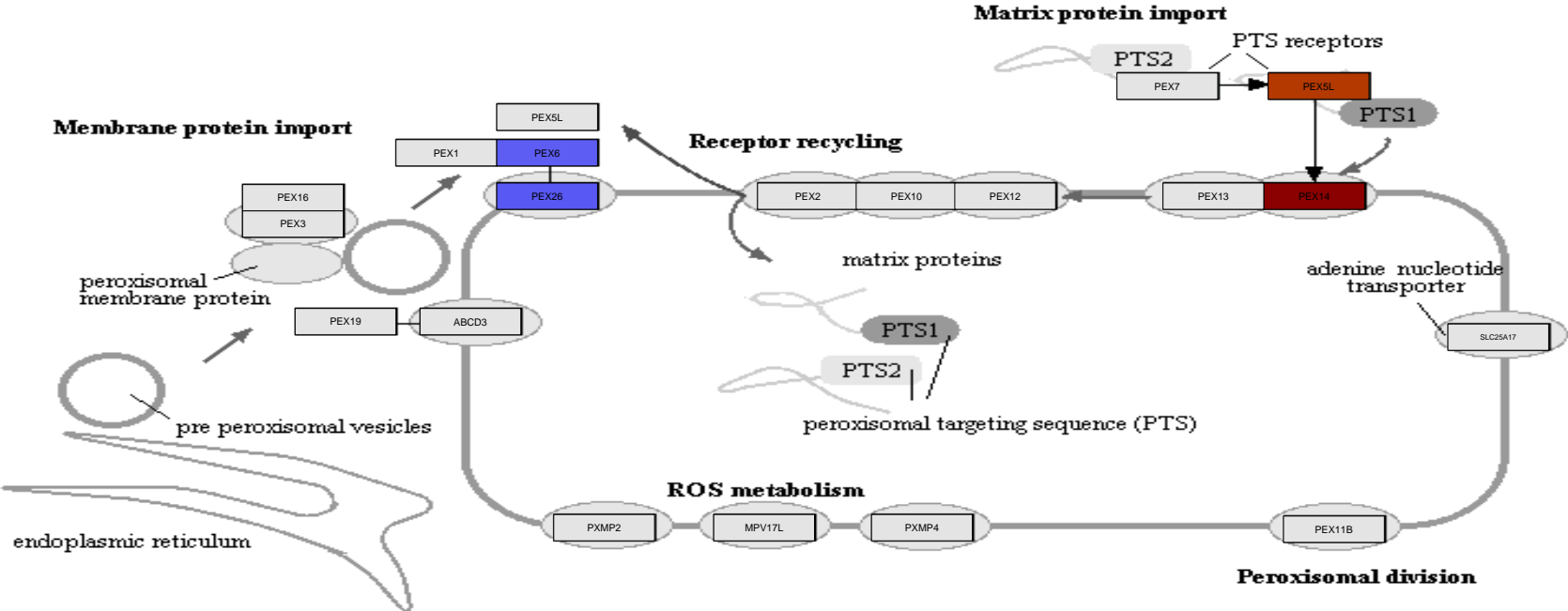


**retinol metabolism**



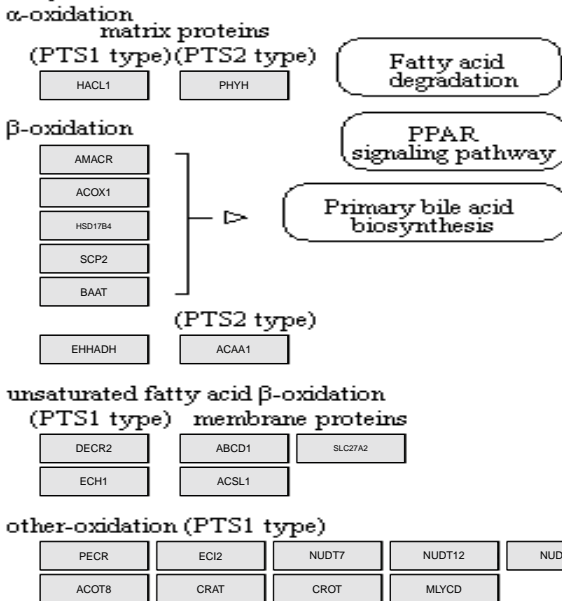
Peroxisome group 3

**Peroxisome biogenesis**

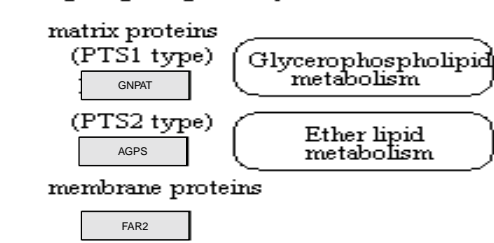


**Peroxisomal proteins**

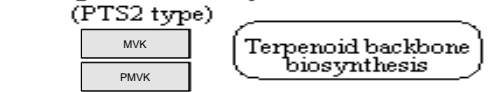
**fatty acid-oxidation**



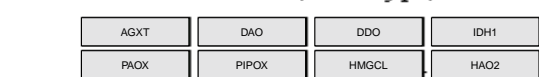
**etherphospholipidbiosynthesis**



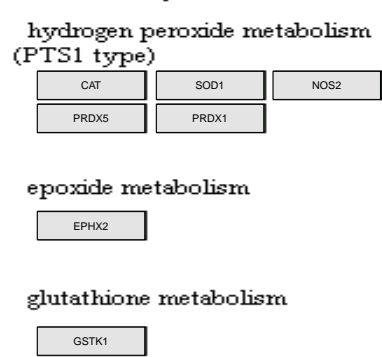
**sterol precursor biosynthesis**



**amino acid metabolism (PTS1 type)**



**antioxidant system**



**purine metabolism**

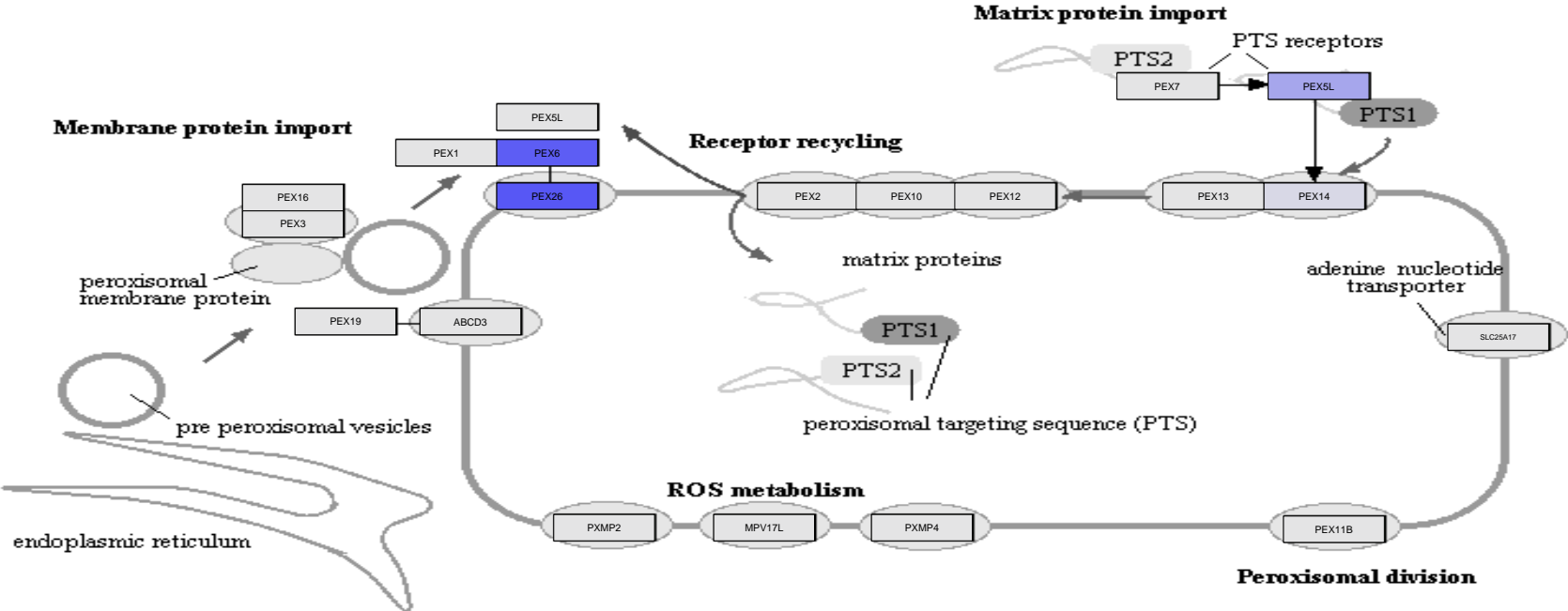


**retinol metabolism**



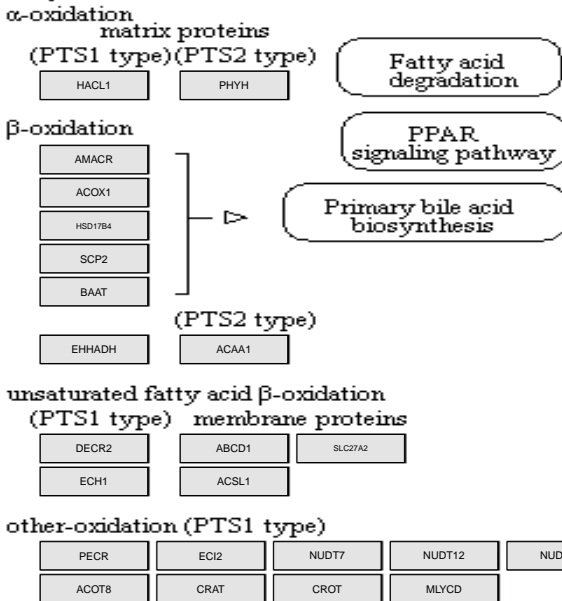
Peroxisome group 4

**Peroxisome biogenesis**

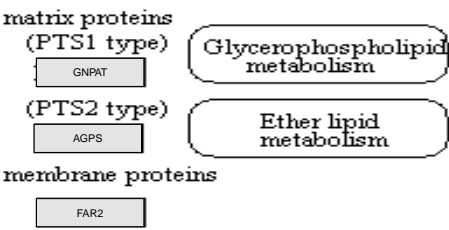


**Peroxisomal proteins**

**fatty acid-oxidation**



**etherphospholipidbiosynthesis**



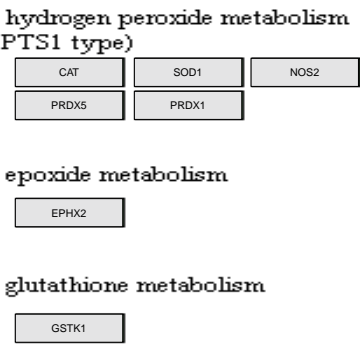
**sterol precursor biosynthesis**



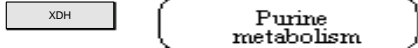
**amino acid metabolism (PTS1 type)**



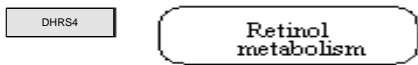
**antioxidant system**



**purine metabolism**



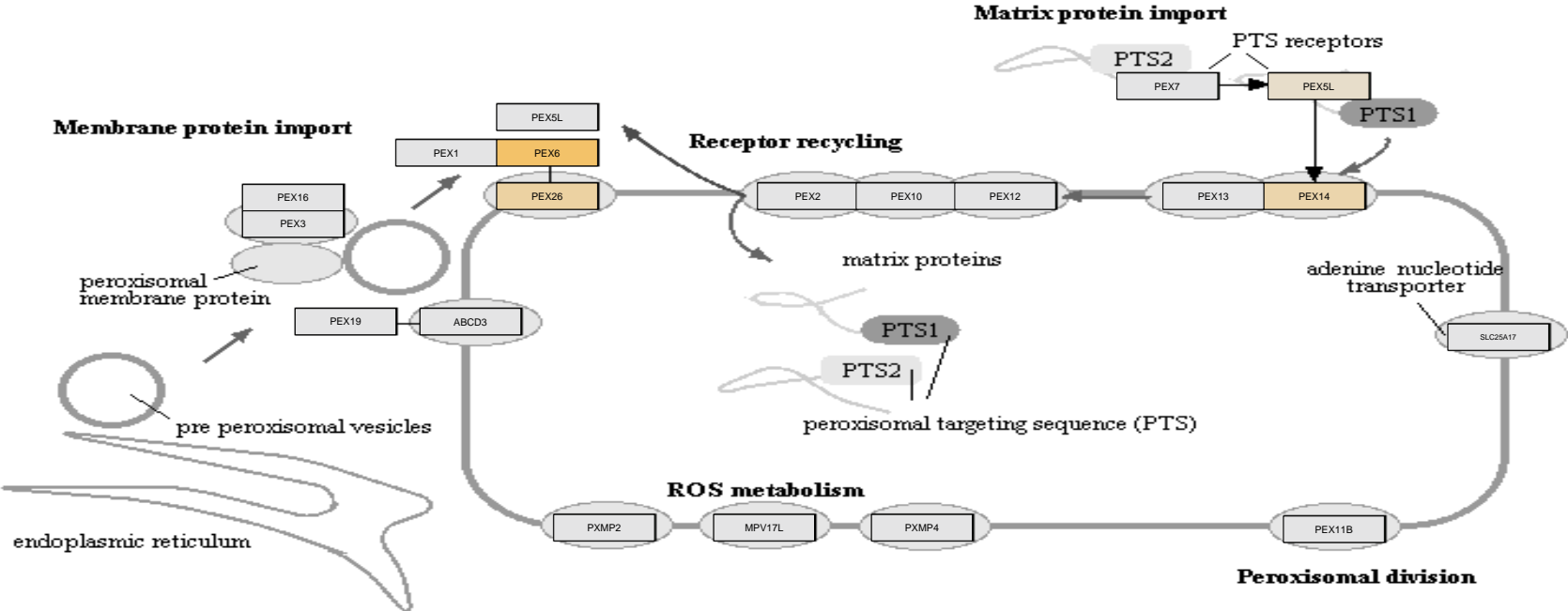
**retinol metabolism**





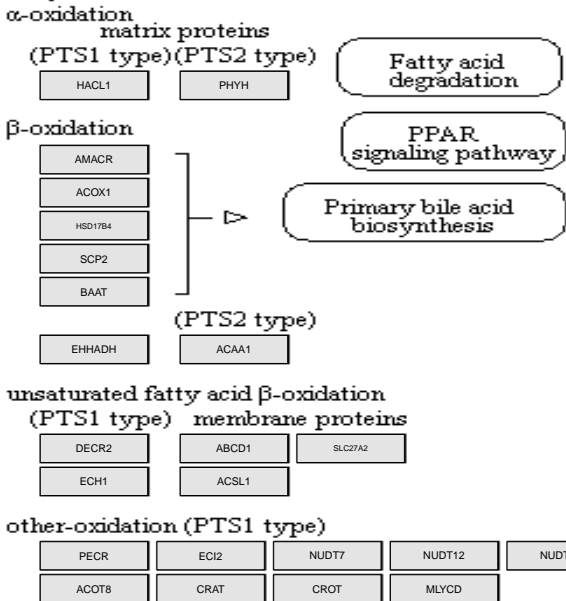
Peroxisome group 5

**Peroxisome biogenesis**

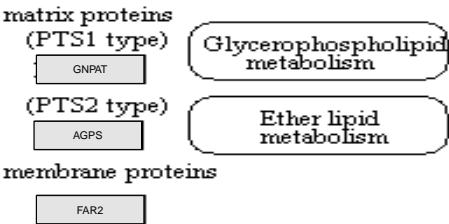


**Peroxisomal proteins**

**fatty acid-oxidation**



**etherphospholipid biosynthesis**



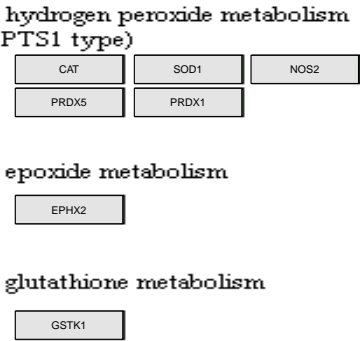
**sterol precursor biosynthesis**



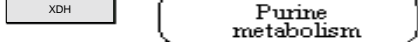
**amino acid metabolism (PTS1 type)**



**antioxidant system**



**purine metabolism**

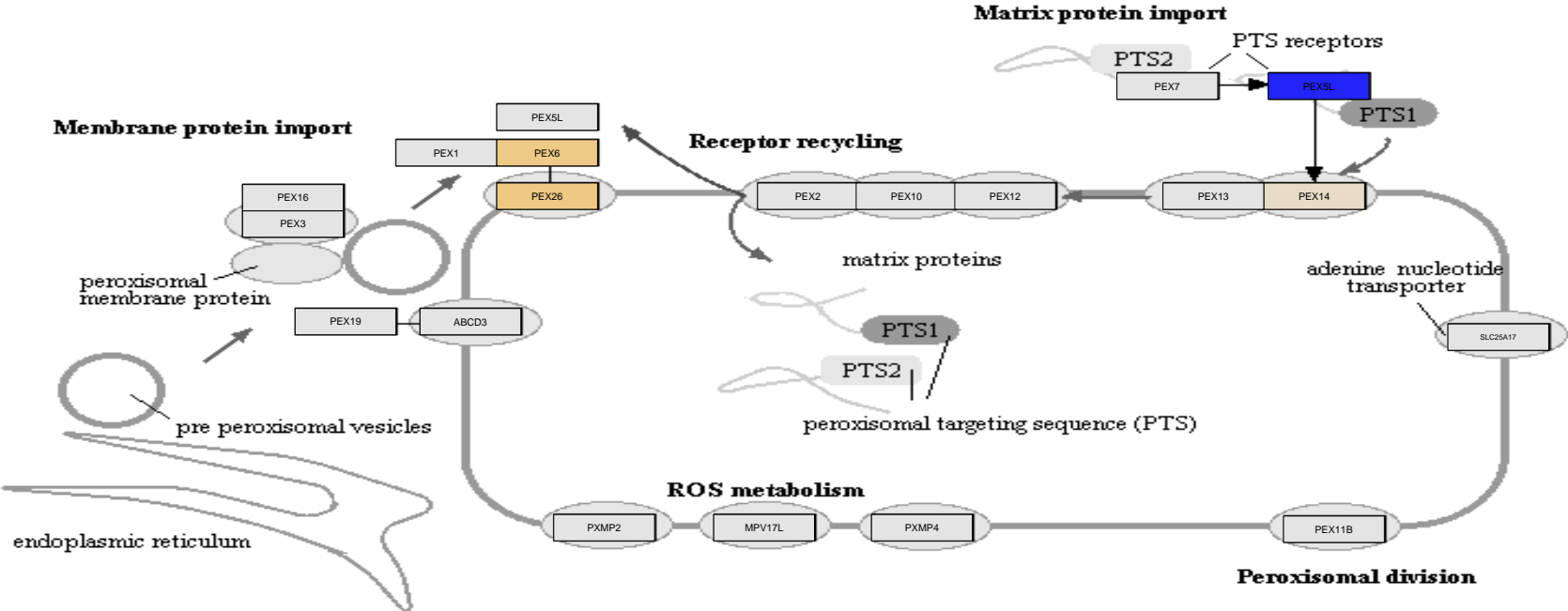


**retinol metabolism**



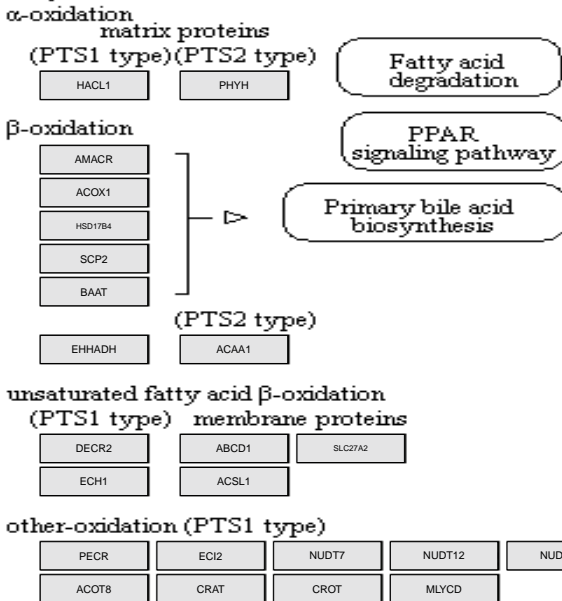
Peroxisome group 6

**Peroxisome biogenesis**

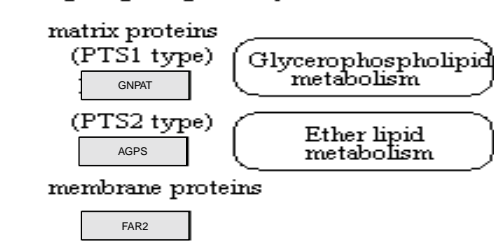


**Peroxisomal proteins**

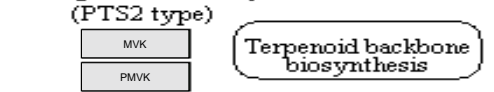
**fatty acid-oxidation**



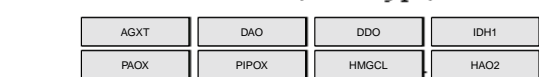
**etherphospholipid biosynthesis**



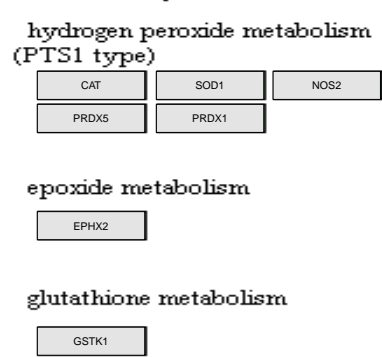
**sterol precursor biosynthesis**



**amino acid metabolism (PTS1 type)**



**antioxidant system**



**purine metabolism**

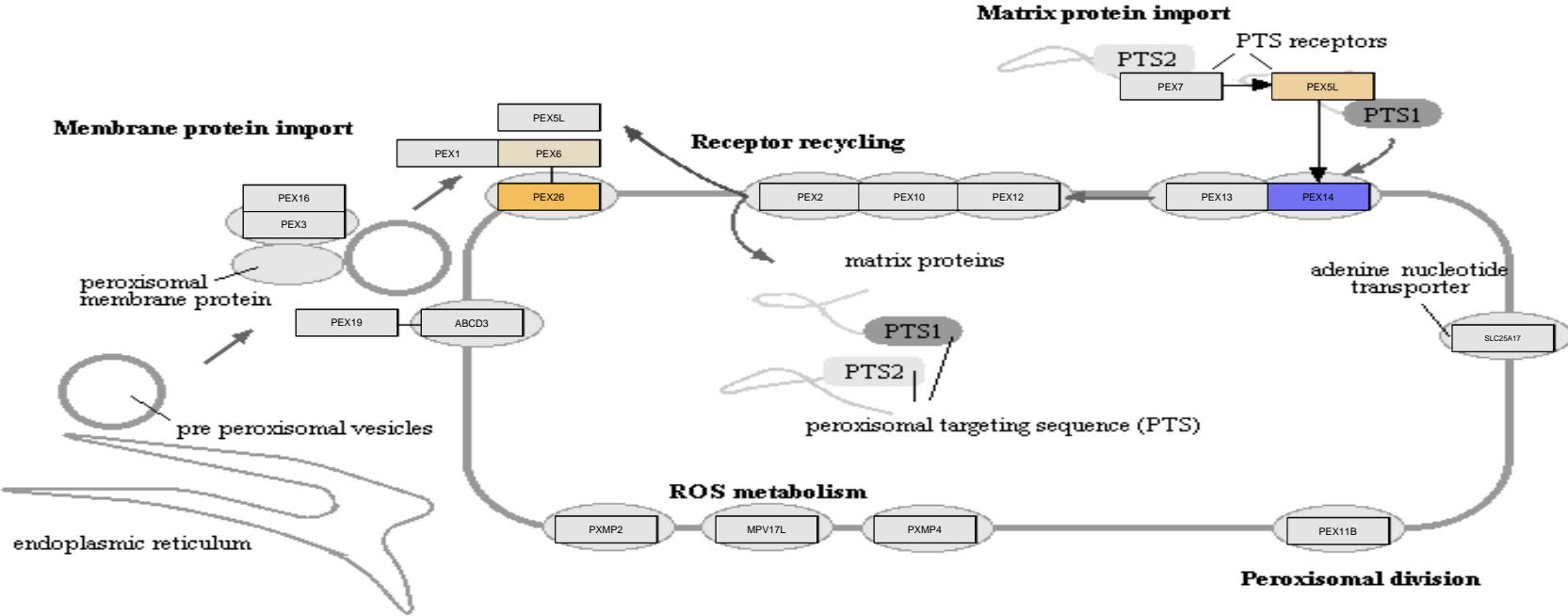


**retinol metabolism**



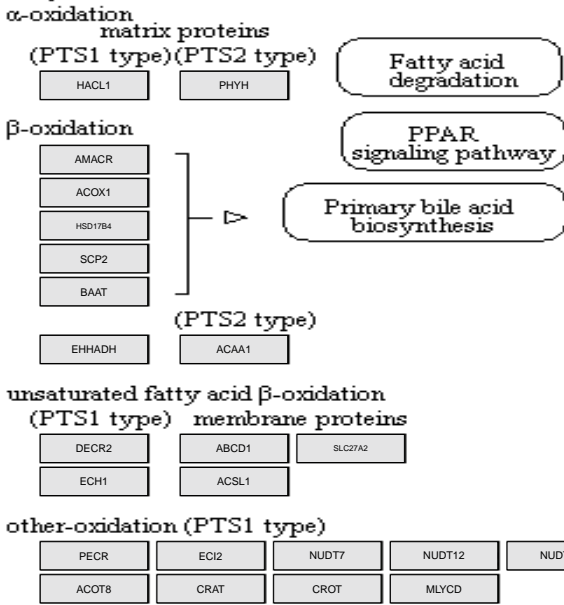
Peroxisome group 7

**Peroxisome biogenesis**

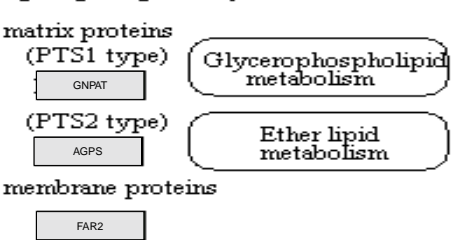


**Peroxisomal proteins**

**fatty acid-oxidation**



**etherphospholipidbiosynthesis**



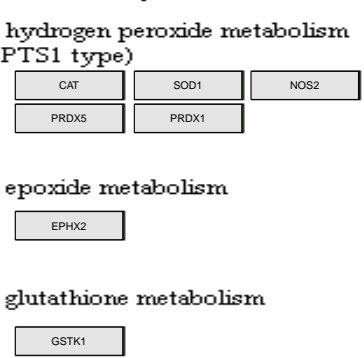
**sterol precursor biosynthesis**



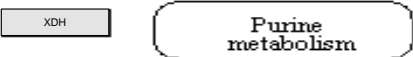
**amino acid metabolism (PTS1 type)**



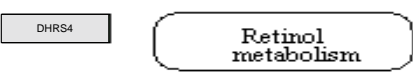
**antioxidant system**



**purine metabolism**

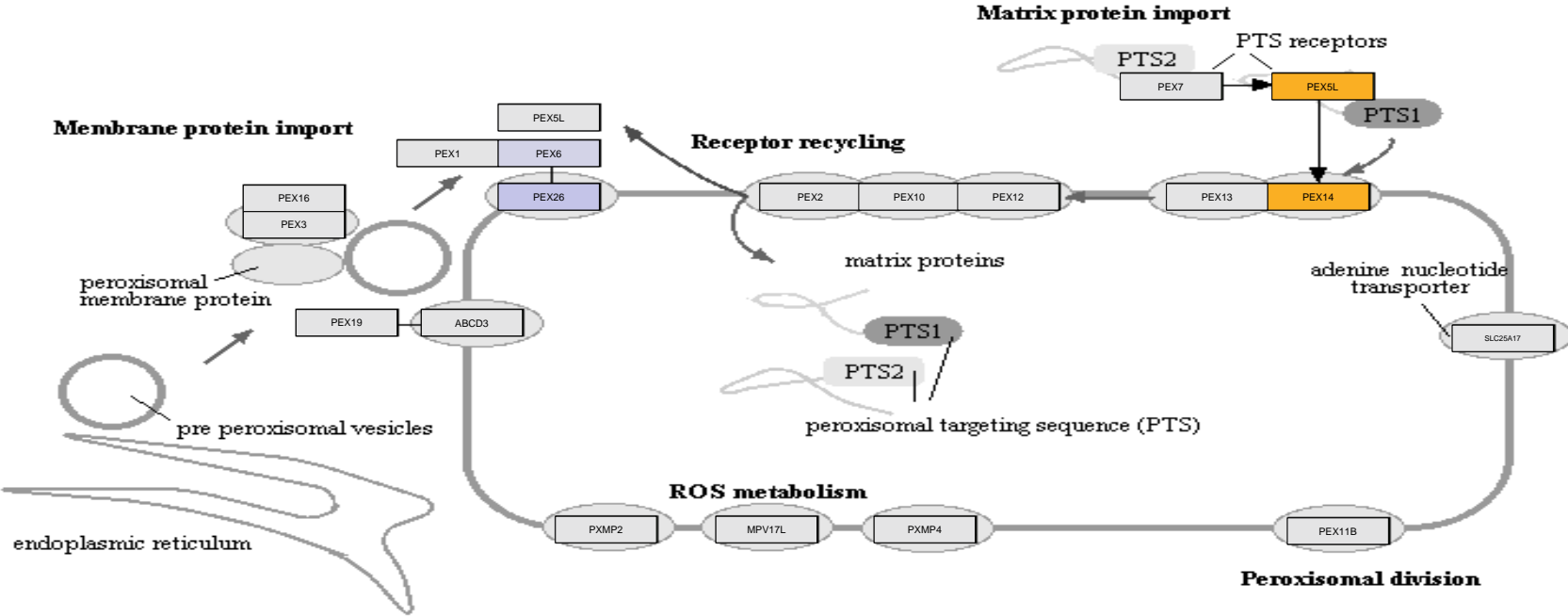


**retinol metabolism**



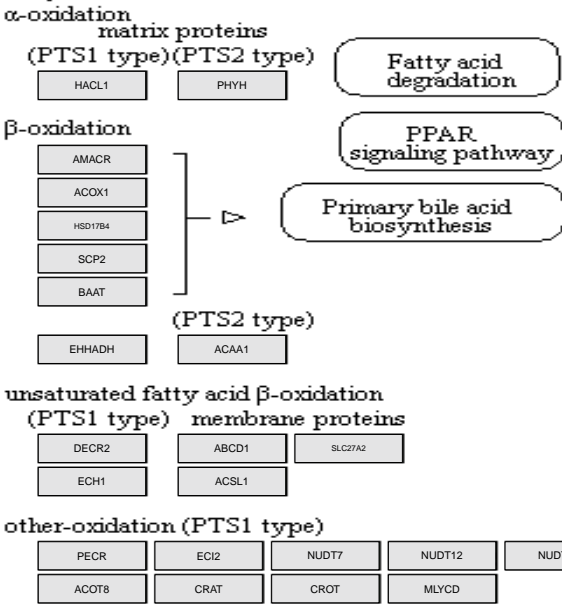
Peroxisome group 8

**Peroxisome biogenesis**

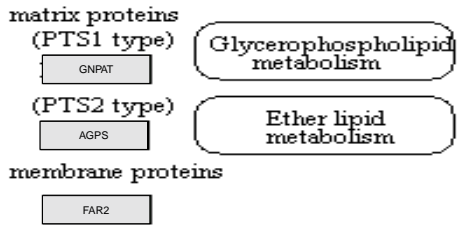


**Peroxisomal proteins**

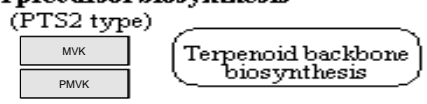
**fatty acid-oxidation**



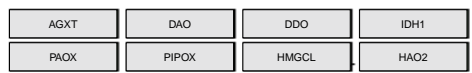
**etherphospholipidbiosynthesis**



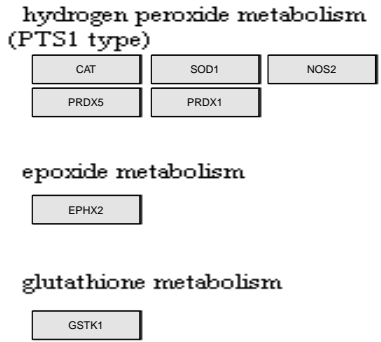
**sterol precursor biosynthesis**



**amino acid metabolism (PTS1 type)**



**antioxidant system**



**purine metabolism**



**retinol metabolism**

