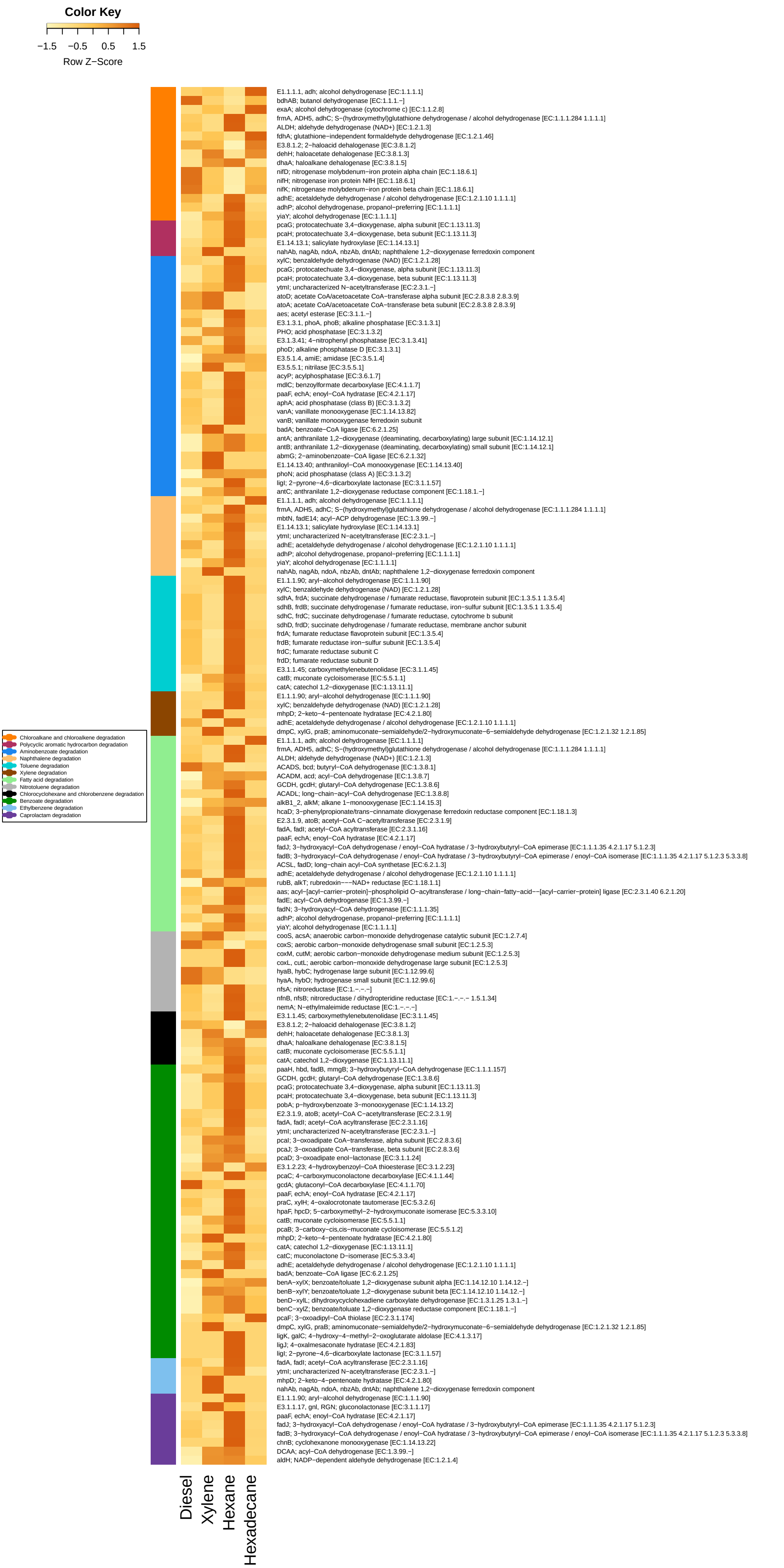
Color Key
−1.5 −0.5 0.5 1.5
Row Z−Score
E1.1.1.1, adh; alcohol dehydrogenase [EC:1.1.1.1]
bdhAB; butanol dehydrogenase [EC:1.1.1.−]
exaA; alcohol dehydrogenase (cytochrome c) [EC:1.1.2.8]
frmA, ADH5, adhC; S−(hydroxymethyl)glutathione dehydrogenase / alcohol dehydrogenase [EC:1.1.1.284 1.1.1.1]
ALDH; aldehyde dehydrogenase (NAD+) [EC:1.2.1.3]
fdhA; glutathione−independent formaldehyde dehydrogenase [EC:1.2.1.46]
E3.8.1.2; 2−haloacid dehalogenase [EC:3.8.1.2]
dehH; haloacetate dehalogenase [EC:3.8.1.3]
dhaA; haloalkane dehalogenase [EC:3.8.1.5]
nifD; nitrogenase molybdenum−iron protein alpha chain [EC:1.18.6.1]
nifH; nitrogenase iron protein NifH [EC:1.18.6.1]
nifK; nitrogenase molybdenum−iron protein beta chain [EC:1.18.6.1]
adhE; acetaldehyde dehydrogenase / alcohol dehydrogenase [EC:1.2.1.10 1.1.1.1]
adhP; alcohol dehydrogenase, propanol−preferring [EC:1.1.1.1]
yiaY; alcohol dehydrogenase [EC:1.1.1.1]
pcaG; protocatechuate 3,4−dioxygenase, alpha subunit [EC:1.13.11.3]
pcaH; protocatechuate 3,4−dioxygenase, beta subunit [EC:1.13.11.3]
E1.14.13.1; salicylate hydroxylase [EC:1.14.13.1]
nahAb, nagAb, ndoA, nbzAb, dntAb; naphthalene 1,2−dioxygenase ferredoxin component
xylC; benzaldehyde dehydrogenase (NAD) [EC:1.2.1.28]
pcaG; protocatechuate 3,4−dioxygenase, alpha subunit [EC:1.13.11.3]
pcaH; protocatechuate 3,4−dioxygenase, beta subunit [EC:1.13.11.3]
ytmI; uncharacterized N−acetyltransferase [EC:2.3.1.−]
atoD; acetate CoA/acetoacetate CoA−transferase alpha subunit [EC:2.8.3.8 2.8.3.9]
atoA; acetate CoA/acetoacetate CoA−transferase beta subunit [EC:2.8.3.8 2.8.3.9]
aes; acetyl esterase [EC:3.1.1.−]
E3.1.3.1, phoA, phoB; alkaline phosphatase [EC:3.1.3.1]
PHO; acid phosphatase [EC:3.1.3.2]
E3.1.3.41; 4−nitrophenyl phosphatase [EC:3.1.3.41]
phoD; alkaline phosphatase D [EC:3.1.3.1]
E3.5.1.4, amiE; amidase [EC:3.5.1.4]
E3.5.5.1; nitrilase [EC:3.5.5.1]
acyP; acylphosphatase [EC:3.6.1.7]
mdlC; benzoylformate decarboxylase [EC:4.1.1.7]
paaF, echA; enoyl−CoA hydratase [EC:4.2.1.17]
aphA; acid phosphatase (class B) [EC:3.1.3.2]
vanA; vanillate monooxygenase [EC:1.14.13.82]
vanB; vanillate monooxygenase ferredoxin subunit
badA; benzoate−CoA ligase [EC:6.2.1.25]
antA; anthranilate 1,2−dioxygenase (deaminating, decarboxylating) large subunit [EC:1.14.12.1]
antB; anthranilate 1,2−dioxygenase (deaminating, decarboxylating) small subunit [EC:1.14.12.1]
abmG; 2−aminobenzoate−CoA ligase [EC:6.2.1.32]
E1.14.13.40; anthraniloyl−CoA monooxygenase [EC:1.14.13.40]
phoN; acid phosphatase (class A) [EC:3.1.3.2]
ligI; 2−pyrone−4,6−dicarboxylate lactonase [EC:3.1.1.57]
antC; anthranilate 1,2−dioxygenase reductase component [EC:1.18.1.−]
E1.1.1.1, adh; alcohol dehydrogenase [EC:1.1.1.1]
frmA, ADH5, adhC; S−(hydroxymethyl)glutathione dehydrogenase / alcohol dehydrogenase [EC:1.1.1.284 1.1.1.1]
mbtN, fadE14; acyl−ACP dehydrogenase [EC:1.3.99.−]
E1.14.13.1; salicylate hydroxylase [EC:1.14.13.1]
ytmI; uncharacterized N−acetyltransferase [EC:2.3.1.−]
adhE; acetaldehyde dehydrogenase / alcohol dehydrogenase [EC:1.2.1.10 1.1.1.1]
adhP; alcohol dehydrogenase, propanol−preferring [EC:1.1.1.1]
yiaY; alcohol dehydrogenase [EC:1.1.1.1]
nahAb, nagAb, ndoA, nbzAb, dntAb; naphthalene 1,2−dioxygenase ferredoxin component
E1.1.1.90; aryl−alcohol dehydrogenase [EC:1.1.1.90]
xylC; benzaldehyde dehydrogenase (NAD) [EC:1.2.1.28]
sdhA, frdA; succinate dehydrogenase / fumarate reductase, flavoprotein subunit [EC:1.3.5.1 1.3.5.4]
sdhB, frdB; succinate dehydrogenase / fumarate reductase, iron−sulfur subunit [EC:1.3.5.1 1.3.5.4]
sdhC, frdC; succinate dehydrogenase / fumarate reductase, cytochrome b subunit
sdhD, frdD; succinate dehydrogenase / fumarate reductase, membrane anchor subunit
frdA; fumarate reductase flavoprotein subunit [EC:1.3.5.4]
frdB; fumarate reductase iron−sulfur subunit [EC:1.3.5.4]
frdC; fumarate reductase subunit C
frdD; fumarate reductase subunit D
E3.1.1.45; carboxymethylenebutenolidase [EC:3.1.1.45]
catB; muconate cycloisomerase [EC:5.5.1.1]
catA; catechol 1,2−dioxygenase [EC:1.13.11.1]
E1.1.1.90; aryl−alcohol dehydrogenase [EC:1.1.1.90]
xylC; benzaldehyde dehydrogenase (NAD) [EC:1.2.1.28]
mhpD; 2−keto−4−pentenoate hydratase [EC:4.2.1.80]
adhE; acetaldehyde dehydrogenase / alcohol dehydrogenase [EC:1.2.1.10 1.1.1.1]
dmpC, xylG, praB; aminomuconate−semialdehyde/2−hydroxymuconate−6−semialdehyde dehydrogenase [EC:1.2.1.32 1.2.1.85]
E1.1.1.1, adh; alcohol dehydrogenase [EC:1.1.1.1]
frmA, ADH5, adhC; S−(hydroxymethyl)glutathione dehydrogenase / alcohol dehydrogenase [EC:1.1.1.284 1.1.1.1]
ALDH; aldehyde dehydrogenase (NAD+) [EC:1.2.1.3]
ACADS, bcd; butyryl−CoA dehydrogenase [EC:1.3.8.1]
ACADM, acd; acyl−CoA dehydrogenase [EC:1.3.8.7]
GCDH, gcdH; glutaryl−CoA dehydrogenase [EC:1.3.8.6]
ACADL; long−chain−acyl−CoA dehydrogenase [EC:1.3.8.8]
alkB1_2, alkM; alkane 1−monooxygenase [EC:1.14.15.3]
hcaD; 3−phenylpropionate/trans−cinnamate dioxygenase ferredoxin reductase component [EC:1.18.1.3]
E2.3.1.9, atoB; acetyl−CoA C−acetyltransferase [EC:2.3.1.9]
fadA, fadI; acetyl−CoA acyltransferase [EC:2.3.1.16]
paaF, echA; enoyl−CoA hydratase [EC:4.2.1.17]
fadJ; 3−hydroxyacyl−CoA dehydrogenase / enoyl−CoA hydratase / 3−hydroxybutyryl−CoA epimerase [EC:1.1.1.35 4.2.1.17 5.1.2.3]
fadB; 3−hydroxyacyl−CoA dehydrogenase / enoyl−CoA hydratase / 3−hydroxybutyryl−CoA epimerase / enoyl−CoA isomerase [EC:1.1.1.35 4.2.1.17 5.1.2.3 5.3.3.8]
ACSL, fadD; long−chain acyl−CoA synthetase [EC:6.2.1.3]
adhE; acetaldehyde dehydrogenase / alcohol dehydrogenase [EC:1.2.1.10 1.1.1.1]
rubB, alkT; rubredoxin−−−NAD+ reductase [EC:1.18.1.1]
aas; acyl−[acyl−carrier−protein]−phospholipid O−acyltransferase / long−chain−fatty−acid−−[acyl−carrier−protein] ligase [EC:2.3.1.40 6.2.1.20]
fadE; acyl−CoA dehydrogenase [EC:1.3.99.−]
fadN; 3−hydroxyacyl−CoA dehydrogenase [EC:1.1.1.35]
adhP; alcohol dehydrogenase, propanol−preferring [EC:1.1.1.1]
yiaY; alcohol dehydrogenase [EC:1.1.1.1]
cooS, acsA; anaerobic carbon−monoxide dehydrogenase catalytic subunit [EC:1.2.7.4]
coxS; aerobic carbon−monoxide dehydrogenase small subunit [EC:1.2.5.3]
coxM, cutM; aerobic carbon−monoxide dehydrogenase medium subunit [EC:1.2.5.3]
coxL, cutL; aerobic carbon−monoxide dehydrogenase large subunit [EC:1.2.5.3]
hyaB, hybC; hydrogenase large subunit [EC:1.12.99.6]
hyaA, hybO; hydrogenase small subunit [EC:1.12.99.6]
nfsA; nitroreductase [EC:1.−.−.−]
nfnB, nfsB; nitroreductase / dihydropteridine reductase [EC:1.−.−.− 1.5.1.34]
nemA; N−ethylmaleimide reductase [EC:1.−.−.−]
E3.1.1.45; carboxymethylenebutenolidase [EC:3.1.1.45]
E3.8.1.2; 2−haloacid dehalogenase [EC:3.8.1.2]
dehH; haloacetate dehalogenase [EC:3.8.1.3]
dhaA; haloalkane dehalogenase [EC:3.8.1.5]
catB; muconate cycloisomerase [EC:5.5.1.1]
catA; catechol 1,2−dioxygenase [EC:1.13.11.1]
paaH, hbd, fadB, mmgB; 3−hydroxybutyryl−CoA dehydrogenase [EC:1.1.1.157]
GCDH, gcdH; glutaryl−CoA dehydrogenase [EC:1.3.8.6]
pcaG; protocatechuate 3,4−dioxygenase, alpha subunit [EC:1.13.11.3]
pcaH; protocatechuate 3,4−dioxygenase, beta subunit [EC:1.13.11.3]
pobA; p−hydroxybenzoate 3−monooxygenase [EC:1.14.13.2]
E2.3.1.9, atoB; acetyl−CoA C−acetyltransferase [EC:2.3.1.9]
fadA, fadI; acetyl−CoA acyltransferase [EC:2.3.1.16]
ytmI; uncharacterized N−acetyltransferase [EC:2.3.1.−]
pcaI; 3−oxoadipate CoA−transferase, alpha subunit [EC:2.8.3.6]
pcaJ; 3−oxoadipate CoA−transferase, beta subunit [EC:2.8.3.6]
pcaD; 3−oxoadipate enol−lactonase [EC:3.1.1.24]
E3.1.2.23; 4−hydroxybenzoyl−CoA thioesterase [EC:3.1.2.23]
pcaC; 4−carboxymuconolactone decarboxylase [EC:4.1.1.44]
gcdA; glutaconyl−CoA decarboxylase [EC:4.1.1.70]
paaF, echA; enoyl−CoA hydratase [EC:4.2.1.17]
praC, xylH; 4−oxalocrotonate tautomerase [EC:5.3.2.6]
hpaF, hpcD; 5−carboxymethyl−2−hydroxymuconate isomerase [EC:5.3.3.10]
catB; muconate cycloisomerase [EC:5.5.1.1]
pcaB; 3−carboxy−cis,cis−muconate cycloisomerase [EC:5.5.1.2]
mhpD; 2−keto−4−pentenoate hydratase [EC:4.2.1.80]
catA; catechol 1,2−dioxygenase [EC:1.13.11.1]
catC; muconolactone D−isomerase [EC:5.3.3.4]
adhE; acetaldehyde dehydrogenase / alcohol dehydrogenase [EC:1.2.1.10 1.1.1.1]
badA; benzoate−CoA ligase [EC:6.2.1.25]
benA−xylX; benzoate/toluate 1,2−dioxygenase subunit alpha [EC:1.14.12.10 1.14.12.−]
benB−xylY; benzoate/toluate 1,2−dioxygenase subunit beta [EC:1.14.12.10 1.14.12.−]
benD−xylL; dihydroxycyclohexadiene carboxylate dehydrogenase [EC:1.3.1.25 1.3.1.−]
benC−xylZ; benzoate/toluate 1,2−dioxygenase reductase component [EC:1.18.1.−]
pcaF; 3−oxoadipyl−CoA thiolase [EC:2.3.1.174]
dmpC, xylG, praB; aminomuconate−semialdehyde/2−hydroxymuconate−6−semialdehyde dehydrogenase [EC:1.2.1.32 1.2.1.85]
ligK, galC; 4−hydroxy−4−methyl−2−oxoglutarate aldolase [EC:4.1.3.17]
ligJ; 4−oxalmesaconate hydratase [EC:4.2.1.83]
ligI; 2−pyrone−4,6−dicarboxylate lactonase [EC:3.1.1.57]
fadA, fadI; acetyl−CoA acyltransferase [EC:2.3.1.16]
ytmI; uncharacterized N−acetyltransferase [EC:2.3.1.−]
mhpD; 2−keto−4−pentenoate hydratase [EC:4.2.1.80]
nahAb, nagAb, ndoA, nbzAb, dntAb; naphthalene 1,2−dioxygenase ferredoxin component
E1.1.1.90; aryl−alcohol dehydrogenase [EC:1.1.1.90]
E3.1.1.17, gnl, RGN; gluconolactonase [EC:3.1.1.17]
paaF, echA; enoyl−CoA hydratase [EC:4.2.1.17]
fadJ; 3−hydroxyacyl−CoA dehydrogenase / enoyl−CoA hydratase / 3−hydroxybutyryl−CoA epimerase [EC:1.1.1.35 4.2.1.17 5.1.2.3]
fadB; 3−hydroxyacyl−CoA dehydrogenase / enoyl−CoA hydratase / 3−hydroxybutyryl−CoA epimerase / enoyl−CoA isomerase [EC:1.1.1.35 4.2.1.17 5.1.2.3 5.3.3.8]
chnB; cyclohexanone monooxygenase [EC:1.14.13.22]
DCAA; acyl−CoA dehydrogenase [EC:1.3.99.−]
aldH; NADP−dependent aldehyde dehydrogenase [EC:1.2.1.4]
Chloroalkane and chloroalkene degradation
Polycyclic aromatic hydrocarbon degradation
Aminobenzoate degradation
Naphthalene degradation
Toluene degradation
Xylene degradation
Fatty acid degradation
Nitrotoluene degradation
Chlorocyclohexane and chlorobenzene degradation
Benzoate degradation
Ethylbenzene degradation
Caprolactam degradation
Diesel
Xylene
Hexane
Hexadecane