

Enzyme list *

Substrate	Products	EC Number	Reaction
Saccharide	Glucose dehydrogenase	1.1.5.9	D-Glucose + acceptor → D-Glucono-1,5-lactone + reduced acceptor
	Pyranose oxidase	1.1.3.10	D-Glucose + O ₂ → 2-Dehydro-D-glucose + H ₂ O ₂
Amino acid (Oxidase)	D-Amino acid oxidase	1.4.3.3	D-Amino acid + H ₂ O + O ₂ → 2-Oxo acid + NH ₃ + H ₂ O ₂
	L-Amino acid oxidase	1.4.3.2	L-Amino acid + H ₂ O + O ₂ → 2-Oxo acid + NH ₃ + H ₂ O ₂ (L-Phenylalanine + H ₂ O + O ₂ → Phenylpyruvic acid + NH ₃ + H ₂ O ₂)
	Glycine oxidase	1.4.3.19	Glycine + H ₂ O + O ₂ → Glyoxylic acid + NH ₃ + H ₂ O ₂
	L-Kynurenine 3-monooxygenase	1.14.13.9	L-Kynurenine + NAD(P)H + H ⁺ + O ₂ → 3-Hydroxy-L-kynurenine + NAD(P) ⁺ + H ₂ O
	L-Tryptophan oxidase	-	L-Tryptophan + H ₂ O + O ₂ → Indole-3-pyruvic acid + NH ₃ + H ₂ O ₂
Amino acid (Others)	Alanine racemase	5.1.1.1	L-Alanine ↔ D-Alanine
	beta-Cyanoalanine synthase	2.5.1.47	O-Acetyl-L-serine + HCN → beta-Cyano-L-alanine + CH ₃ COOH
	gamma-Cyano-alpha- aminobutyric acid synthase	2.5.1.49	O-Acetyl-L-homoserine + HCN → gamma-Cyano-alpha-aminobutyric acid + CH ₃ COOH
	Tryptophanase	4.1.99.1	L-Tryptophan + H ₂ O ↔ Indole + Pyruvic acid + NH ₃
	beta-Tyrosinase	4.1.99.2	L-Tyrosine + H ₂ O ↔ Phenol + Pyruvic acid + NH ₃
	Aminoacyl-tRNA synthetase	-	Amino acid + ATP → Aminoacyl-AMP + Diphosphate Aminoacyl-AMP + tRNA → Aminoacyl-tRNA + AMP
Carboxylic acid	Formate dehydrogenase	1.17.1.9	Formate + NAD ⁺ ↔ CO ₂ + NADH

* Some of these products are under development.