

Amino acid hydroxylases (E.C.1.14.16.-)

Overview: The amino acid hydroxylases (monooxygenases) are iron-containing enzymes that utilize molecular oxygen and tetrahydrobiopterin as co-substrate and co-factor respectively.

Nomenclature	L-Phenylalanine hydroxylase	L-Tryptophan hydroxylase	L-Tyrosine hydroxylase
E.C.	1.14.16.1	1.14.16.4	1.14.16.2
Preferred abbreviation	PH	TPH	TH
Other names	Phenylalanine 4-monooxygenase	Tryptophan 5-monooxygenase	Tyrosine 3-monooxygenase
Ensembl ID	ENSG00000171759	TPH1 ENSG00000129167; TPH2 ENSG00000139287	ENSG00000180176
Product	Tyrosine	5-Hydroxytryptophan	DOPA
Selective inhibitors	α -Methylphenylalanine (Greengard et al., 1996), PCPA	Fenfluramine, PCPA, α -propylidopacetamide, 6-fluorotryptophan (Nicholson & Wright, 1981)	3-Chlorotyrosine, 3-iodotyrosine, α -methyltyrosine, α -propylidopacetamide

Abbreviations: DOPA, 3,4-dihydroxyphenylalanine; PCPA, 4-chlorophenylalanine

Further Reading

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