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# Kynurenine

National Cancer Institute

## Source

National Cancer Institute. *Kynurenine*. NCI Thesaurus. Code C129555.

A ketone and an amino acid derivative that is synthesized by either tryptophan 2,3-dioxygenase (TDO)- or indoleamine 2,3-dioxygenase (IDO)-mediated oxidation of tryptophan with diverse biological functions, including vasodilatory, immunoregulatory and neuromodulatory activities. Kynurenine is a precursor for niacin. Additionally, kynurenine can be further metabolized into anthranilic acid, kynurenic acid, and 3-hydroxykynurenine; aberrant production of kynurenine is associated with neurological disease-related cognitive deficits and depressive symptoms. Overexpressed in certain cancer cell types, kynurenine could potentially be used as a biomarker to assess cancer risk.