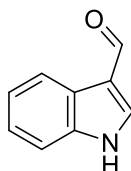


## Indole-3-carboxaldehyde

Code No.: **BIA-I2396**

Pack sizes: **25 mg, 100 mg**



Synonyms : 1H-Indole-3-methanal, 3-Formyl-1H-indole, 3-Formylindole, 3-Indolylformaldehyde

### Specifications

CAS #	: <b>487-89-8</b>
Molecular Formula	: <b>C<sub>9</sub>H<sub>7</sub>NO</b>
Molecular Weight	: <b>145.16</b>
Source	: <b>Synthetic</b>
Appearance	: <b>White solid</b>
Purity	: <b>&gt;95% by HPLC</b>
Long Term Storage	: <b>-20°C</b>
Solubility	: <b>Soluble in methanol or DMSO</b>

### Application Notes

Indole-3-carboxaldehyde is an endogenous metabolite of plants and is produced in humans by the metabolism of L-tryptophan in Lactobacillus and other gastrointestinal bacteria. Indole-3-carboxaldehyde is an immunomodulator, acting as an agonist of the aryl hydrocarbon receptor in human intestinal immune cells, stimulating the production of interleukin-22. Indole-3-carboxaldehyde contributes to plant defences against phytopathogenic fungi and modulates the quorum sensing pathway in *V. parahaemolyticus* in vitro to reduce biofilm formation. Indole-3-carboxaldehyde can be used as a biomarker for cardiometabolic risk in humans.

### References

1. Microbial metabolism of dietary components to bioactive metabolites: Opportunities for new therapeutic interventions. Zhang L.S. & Davies S.S. *Genome Med.* 2016, 8, 46.
2. Trichoderma-induced plant immunity likely involves both hormonal- and camalexin-independent mechanisms in *Arabidopsis thaliana* and confers resistance against necrotrophic fungus *Botrytis cinerea*. Contreras-Cornejo H.A. et al. *Plant Signal Behav.* 2011, 6, 1554.
3. In vitro evaluation of indole-3-carboxaldehyde on *Vibrio parahaemolyticus* biofilms. Murugan R. et al. *Biologia* 2016, 71, 247—255.
4. Longitudinal relationship of amino acids and indole metabolites with long-term body mass index and cardiometabolic risk markers in young individuals. Oluwagbemigun K. et al. *Scientific Rep.* 2020, 10, 6399.