

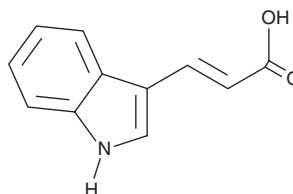
# PRODUCT INFORMATION



## *trans*-Indole-3-acrylic Acid

Item No. 40655

CAS Registry No.: 29953-71-7  
Formal Name: 3-(1H-indol-3-yl)-2E-propenoic acid  
Synonyms: IA, *trans*-3-Indoleacrylic acid  
MF: C<sub>11</sub>H<sub>9</sub>NO<sub>2</sub>  
FW: 187.2  
Purity: ≥98%  
Supplied as: A solid  
Storage: -20°C  
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

*trans*-Indole-3-acrylic acid is supplied as a solid. A stock solution may be made by dissolving the *trans*-indole-3-acrylic acid in the solvent of choice, which should be purged with an inert gas. *trans*-Indole-3-acrylic acid is soluble (≥10 mg/ml) in DMSO and ethanol.

### Description

*trans*-Indole-3-acrylic acid is a metabolite of the essential amino acid L-tryptophan (Item No. 29600).<sup>1</sup> It is formed from tryptophan by gut microbiota. *trans*-Indole-3-acrylic acid (100 μM) increases the levels of mRNA encoding mucin 2 and IL-10, as well as decreases mRNA encoding Tnf-α, in primary mouse large intestinal spheroids co-cultured with LPS-stimulated primary mouse bone marrow-derived macrophages (BMDMs). It has been used as a precursor in the synthesis of anticancer agents and tubulin polymerization inhibitors, as well as used as a reactive chromophore probe to assess the α and β subunit conformational changes of *S. typhimurium* tryptophan synthase in tryptophan biosynthesis.<sup>2,3</sup>

### References

1. Wlodarska, M., Luo, C., Kolde, R., *et al.* Indoleacrylic acid produced by commensal peptostreptococcus species suppresses inflammation. *Cell Host Microbe* **22(1)**, 25-37 (2017).
2. Baytas, S.N., Inceler, N., Yilmaz, A., *et al.* Synthesis, biological evaluation and molecular docking studies of *trans*-indole-3-acrylamide derivatives, a new class of tubulin polymerization inhibitors. *Bioorg. Med. Chem.* **22(12)**, 3096-3104 (2014).
3. Casino, P., Niks, D., Ngo, H., *et al.* Allosteric regulation of tryptophan synthase channeling: The internal aldimine probed by *trans*-3'-indole-3'-acrylate binding. *Biochemistry* **46(26)**, 7728-7739 (2007).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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