

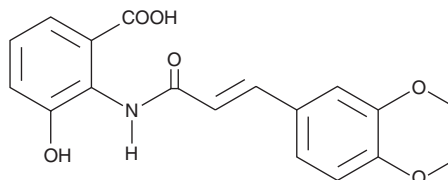
# PRODUCT INFORMATION



## 3,4-DAA

Item No. 10007980

**CAS Registry No.:** 2117759-07-4  
**Formal Name:** 2-[3-(3,4-dimethoxy-phenyl)-acryloylamino]-3-hydroxy-benzoic acid  
**MF:** C<sub>18</sub>H<sub>17</sub>NO<sub>6</sub>  
**FW:** 343.3  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 347 nm  
**Supplied as:** A crystalline 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

3,4-DAA is supplied as a crystalline solid. A stock solution may be made by dissolving the 3,4-DAA in the solvent of choice, which should be purged with an inert gas. 3,4-DAA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 3,4-DAA in ethanol is approximately 1 mg/ml and approximately 20 mg/ml in DMSO and DMF.

3,4-DAA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 3,4-DAA should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 3,4-DAA has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Local catabolism of the amino acid tryptophan by indoleamine 2,3-dioxygenase (IDO) is considered an important mechanism of regulating T-cell immunity. Inhibition of the production of T helper-1 (T<sub>H</sub>1) cytokines offers a new strategy for treating T<sub>H</sub>1 mediated autoimmune diseases such as multiple sclerosis. 3,4-DAA is an orally active synthetic derivative of the tryptophan metabolite anthranilic acid. It suppresses antigen-specific proliferation of MBP Ac1-11 TCR CD4<sup>+</sup> T-cells. At a concentration of 200 μM, 3,4-DAA reduces IFN-γ, IL-2, IL-12/23 p40, and TNFα in splenocytes from antigen-induced transgenic mice. However, at a concentration of 30 μM, IL-4, and IL-10 levels were increased. Expression of inducible nitric oxide synthase and nitric oxide release from EOC20 cells induced by IFN-γ and LPS are also suppressed by 3,4-DAA at concentration of 30-200 μM. Mice with experimental autoimmune encephalomyelitis treated orally (300 mg/kg per day) with 3,4-DAA exhibited fewer and milder relapses and less severe disease compared to control animals.<sup>1</sup>

### Reference

1. Platten, M., Ho, P.P., Youssef, S., *et al.* Treatment of autoimmune neuroinflammation with a synthetic tryptophan metabolite. *Science* **310**(5749), 850-855 (2005).

**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.

**WARRANTY AND LIMITATION OF REMEDY**  
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### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM