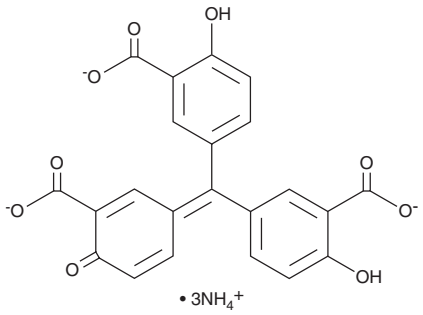
PRODUCT INFORMATION

Aurintricarboxylic Acid (ammonium salt)

Item No. 30636

CAS Registry No.: 569-58-4
Formal Name: 3,3′-[(3-carboxy-4-oxo-2,5-cyclohexadien-1-ylidene)methylene]*bis*[6-hydroxy-benzoic acid, triammonium salt
Synonym: ATA
MF: $C_{22}H_{11}O_9 \bullet 3NH_4$
FW: 473.4
UV/Vis.: λ_{max}: 214 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Aurintricarboxylic acid (ammonium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the aurintricarboxylic acid (ammonium salt) in the solvent of choice, which should be purged with an inert gas. Aurintricarboxylic acid (ammonium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of aurintricarboxylic acid (ammonium salt) in ethanol is approximately 10 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of aurintricarboxylic acid (ammonium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of aurintricarboxylic acid (ammonium salt) in PBS, pH 7.2, is approximately 0.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Aurintricarboxylic acid (ATA) is an inhibitor of protein synthesis that has diverse biological activities.[1-8] It inhibits the activity of a variety of enzymes, including the nucleases DNase I, RNase A, and S1, as well as the serine proteases trypsin and chymotrypsin in a concentration-dependent manner.[2,3] ATA inhibits replication of severe acute respiratory syndrome coronavirus (SARS-CoV; EC_{50} = 200 µg/ml) and human enterovirus 71 in Vero cells (EV71; EC_{50} = 2.9 µM), as well as reduces HIV-1- or HIV-2-induced cytopathogenicity in MT-4 cells (IC_{50}s = 1.1 and 0.85 µg/ml, respectively).[4-6] It inhibits apoptosis induced by sanguinarine (Item No. 16951) in K562 leukemia cells when used at a concentration of 100 µM.[7] ATA (20 mg/kg, i.p.) decreases CNS $CD4^+$ T cell infiltration and reduces hind limb weakness and paralysis in a mouse model of myelin oligodendrocyte glycoprotein-induced experimental autoimmune encephalomyelitis (EAE).[8]

References

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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