Anacardic Acid
Item No. 13144

CAS Registry No.: 16611-84-0
Formal Name: 2-hydroxy-6-pentadecylbenzoic acid
Synonym: 6-pentadecyl Salicylic Acid
MF: C_{22}H_{36}O_{3}
FW: 348.5
Purity: ≥98%
UV/Vis.: \( \lambda_{\text{max}} \) : 209, 243, 312 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

Laboratory Procedures

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

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

Description

Anacardic acid, isolated from cashew shells or several other medicinal plants, is the general name given to a family of four different 6-alkyl salicylic acids having varying degrees of unsaturation in the 15-carbon alkyl chain. These compounds are associated with anti-inflammatory, anti-tumor, molluscidal, and antimicrobial activity. Literature frequently sites and gives the name anacardic acid to the completely-saturated compound (6-pentadecyl salicylic acid). Anacardic acid inhibits the histone acetyltransferase (HAT) activity of the transcription co-activators p300 and p300/CREB-binding protein-associated factor (PCAF) with IC_{50} values of 8.5 and 5 µM, respectively. At 25 µmol/L, anacardic acid suppresses NF-κB activation, inhibits IκB-α phosphorylation, and prohibits p65 nuclear translocation in KBM-5 cells.

References