Anacardic Acid is a 6-alkyl salicylic acid that inhibits the histone acetyltransferase (HAT) activity of the transcription co-activators p300 and p300/CREB-binding protein-associated factor (pCAF; IC₅₀ values of 8.5 and 5 µM, respectively; Balasubramanyam et al.). Anacardic Acid inhibits HAT-dependent transcription and protein SUMOylation (Cui et al.; Fukuda et al.). In addition, Anacardic Acid is an activator of Aurora kinase A-mediated phosphorylation of Histone H3 (Kishore et al.). At higher concentrations (25 µM), Anacardic Acid suppresses NF-κB activation and inhibits IkB-α phosphorylation (Sung et al.).

**Properties**

**Physical Appearance:** A crystalline solid

**Storage:** Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For long-term storage store with a desiccant. For product expiry date, please contact techsupport@stemcell.com.

**Solubility:**
- · DMSO ≤ 25 mM
- · Absolute ethanol ≤ 25 mM

For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 287 µL of DMSO. Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.
Published Applications

DIFFERENTIATION
- Enhances cardiomyocyte differentiation from mouse embryonic stem cells (Re et al.).

IMMUNOLOGY
- Induces macrophage activation (Gnanaprakasam et al.).
- Exhibits inhibitory and bactericidal activities against methicillin-resistant Staphylococcus aureus (Muroi & Kubo).

CANCER RESEARCH
- Potentiates the apoptosis induced by cytokine and chemotherapeutic agents in cancer cells (Sung et al.).
- Sensitizes tumor cells to ionizing radiation in vitro (Sun et al.).

References


Related Small Molecules
For a complete list of small molecules available from STEMCELL Technologies, please visit our website at www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.

This product is hazardous. Please refer to the Safety Data Sheet (SDS).

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