Certificate of Analysis

Product Name: **Ch 55** **Catalog No.: 2020** **Batch No.: 2**

CAS Number: 110368-33-7

IUPAC Name: 4-[(1*E*)-3-[3,5-*bis*(1,1-Dimethylethyl)phenyl]-3-oxo-1-propenyl]benzoic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{24}H_{28}O_3$

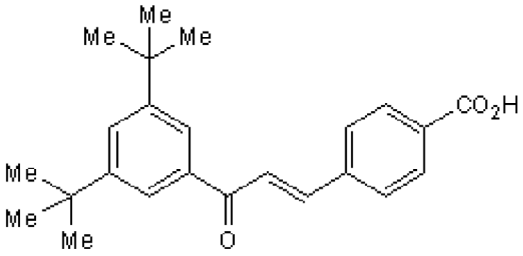
Batch Molecular Weight: 364.47

Physical Appearance: Pale yellow solid

Solubility: ethanol to 50 mM
DMSO to 100 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.5% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	79.09	7.74	
Found	78.7	7.85	

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Description:

Ch 55 is a highly potent synthetic retinoid that has high affinity for RAR-α and RAR-β receptors and low affinity for cellular retinoic acid binding protein (CRABP). Inhibits rabbit tracheal epithelial cell differentiation by inhibiting transglutaminase and increasing cholesterol sulfate (EC_{50} values are 0.02 and 0.03 nM respectively). Induces differentiation of embryonic carcinoma F9 and melanoma S91 cells (EC_{50} values are 0.26 and 0.5 nM respectively) and inhibits the induction of ornithine decarboxylase activity in 3T6 fibroblasts (EC_{50} = 1 nM). Enables generation of Chemically Induced Pluripotent Stem Cells (CiPSCs) from mouse ... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

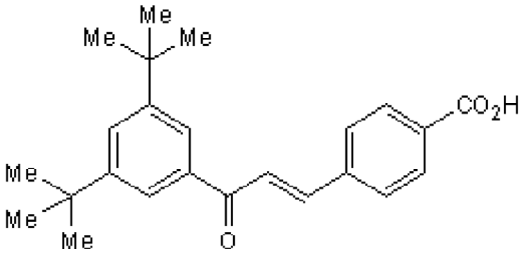
Batch Molecular Formula: $C_{24}H_{28}O_3$

Batch Molecular Weight: 364.47

Physical Appearance: Pale yellow solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

ethanol to 50 mM
DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Hashimoto *et al* (1990) Expression of retinoic acid receptor genes and the ligand-binding selectivity of retinoic acid receptors (RAR's). Biochem.Biophys.Res.Comm. ***166*** 1300.

Sato *et al* (1988) Functional studies of newly sythesized benzoic acid derivatives: identification of highly potent retinoid-like activity. J.Cell.Physiol. ***135*** 179. PMID: 2836439.

Jetten *et al* (1987) New benzoic acid derivatives with retinoid activity: lack of direct correlation between biological activity and binding to cellular retinoic acid binding protein. Cancer Res. ***47*** 3523. PMID: 2884032.