

## Certificate of Analysis

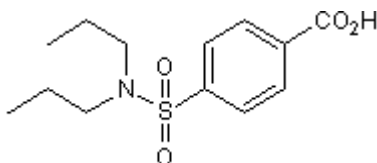
[www.tocris.com](http://www.tocris.com)

**Product Name:** Probenecid  
**CAS Number:** 57-66-9  
**IUPAC Name:** 4-(Dipropylsulfamoyl)benzoic acid

**Catalog No.:** 4107  
**Batch No.:** 1  
**EC Number:** 200-344-3

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>13</sub>H<sub>19</sub>NO<sub>4</sub>S  
**Batch Molecular Weight:** 285.36  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 100 mM  
 ethanol to 100 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 98.1% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	54.72	6.71	4.91
Found	54.8	6.74	4.94

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

## Product Information

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IUPAC Name: 4-(Dipropylsulfamoyl)benzoic acid

**Catalog No.:** 4107

EC Number: 200-344-3

**Batch No.:** 1

**Description:**

Inhibitor of multidrug resistance-associated proteins (MRP). Inhibits organic acid transport in the kidney and other organs. Also exhibits inhibitory activity against pannexin 1 channels (IC<sub>50</sub> ~ 150 µM).

**Physical and Chemical Properties:**

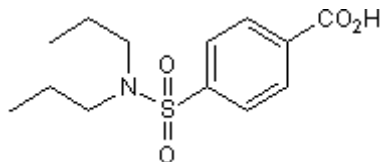
Batch Molecular Formula: C<sub>13</sub>H<sub>19</sub>NO<sub>4</sub>S

Batch Molecular Weight: 285.36

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Store at RT

**Solubility & Usage Info:**

DMSO to 100 mM  
ethanol 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. Our standard recommendations are:

**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:**

**Cunningham et al** (1981) Clinical pharmacokinetics of probenecid. *Clin.Pharmacokinet.* **6** 135. PMID: 7011657.

**Hammond et al** (2007) Glutathione export during apoptosis requires functional multidrug resistance-associated proteins. *J.Biol.Chem.* **282** 14337. PMID: 17374608.

**Silverman et al** (2008) Probenecid, a gout remedy, inhibits pannexin 1 channels. *Am.J.Physiol.Cell Physiol.* **295** C761. PMID: 18596212.

**Ishikawa et al** (2010) Function and expression of ATP-binding cassette transporters in cultured human Y79 retinoblastoma cells. *Biol.Pharm.Bull.* **33** 504. PMID: 20190417.

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