1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: \( \text{C}_{20}\text{H}_{37}\text{N}_{3}\text{O}_{4} \)
Batch Molecular Weight: 383.53
Physical Appearance: White solid
Solubility: DMSO to 50 mM
             ethanol to 25 mM
Storage: Store at -20°C

2. ANALYTICAL DATA

TLC: \( R_f = 0.6 \) (Dichloromethane:Methanol [95:5])
Mass Spectrum: Consistent with structure
**Product Name:** MG 101  
**CAS Number:** 110044-82-1  
**IUPAC Name:** N-Acetyl-L-leucine-L-leucine-L-norleucinal

**Description:**
Calpain inhibitor (IC$_{50}$ = 0.09 μM) that activates p53-dependent apoptosis in tumor cell lines. Increases activated p53, p21 and caspase levels and promotes cell cycle arrest through inhibition of cyclin D degradation in vitro. Also attenuates ischemia/reperfusion injury in cardiomyocytes, hepatocytes and renal tubular cells through downregulation of iNOS and COX-2 expression.

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**Batch Molecular Structure:**
![Molecular Structure Image]

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**Solubility & Usage Info:**
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- Ethanol to 25 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:**