

## Certificate of Analysis

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

**Product Name:** Ro 32-3555

**Catalog No.:** 2916

**Batch No.:** 3

**CAS Number:** 190648-49-8

**IUPAC Name:** ( $\alpha R, \beta R$ )- $\beta$ -(Cyclopentylmethyl)-*N*-hydroxy- $\gamma$ -oxo- $\alpha$ -[(3,4,4-trimethyl-2,5-dioxo-1-imidazolidinyl)methyl]-1-piperidinebutanamide

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:**  $C_{22}H_{36}N_4O_5 \cdot \frac{1}{2}H_2O$

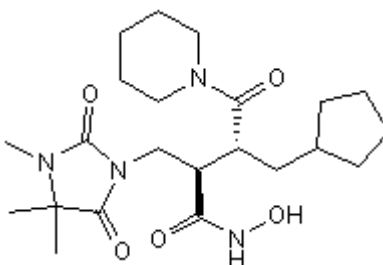
**Batch Molecular Weight:** 445.56

**Physical Appearance:** White solid

**Solubility:** DMSO to 100 mM  
ethanol to 100 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:**  $R_f = 0.51$  (Dichloromethane:Methanol [9:1])

**HPLC:** Shows 97.7% purity

**$^1H$  NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

|             | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 59.31  | 8.37     | 12.57    |
| Found       | 59.21  | 8.33     | 12.49    |

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

## Product Information

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### Description:

Potent, collagenase-selective MMP inhibitor ( $K_i$  values are 3.0, 3.4, 4.4, 59, 154 and 527 nM for MMP-1, MMP-13, MMP-8, MMP-9, MMP-2 and MMP-3 respectively). Inhibits cartilage breakdown *in vitro* and *in vivo* and displays antiarthritic activity. Orally active.

### Physical and Chemical Properties:

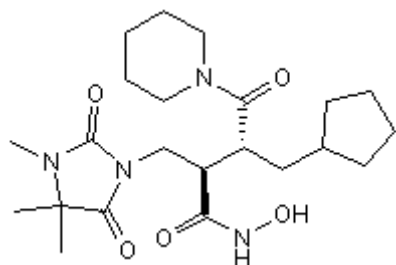
Batch Molecular Formula:  $C_{22}H_{36}N_4O_5 \cdot \frac{1}{2}H_2O$

Batch Molecular Weight: 445.56

Physical Appearance: White solid

**Minimum Purity:** >97%

### Batch Molecular Structure:



**Storage:** Store at -20°C

### 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:

**Lewis et al** (1997) Ro 32-3555, an orally active collagenase inhibitor, prevents cartilage breakdown *in vitro* and *in vivo*. *Br.J.Pharmacol.* **121** 540. PMID: 9179398.

**Broadhurst et al** (1997) Design and synthesis of the cartilage protective agent (CPA, Ro32-3555). *Bioorg.Med.Chem.Letts.* **7** 2299.

**Brewster et al** (1998) Ro 32-3555, an orally active collagenase selective inhibitor, prevents structural damage in the SRT/ORT mouse model of osteoarthritis. *Arthrit.Rheumat.* **41** 1639.

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