

**Product Name:** Tunicamycin

**Catalog No.:** 3516

**Batch No.:** 13

CAS Number: 11089-65-9

IUPAC Name: Tunicamycin from *Streptomyces* sp.

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>39</sub>H<sub>64</sub>N<sub>4</sub>O<sub>16</sub> (tunicamycin C, n=10)

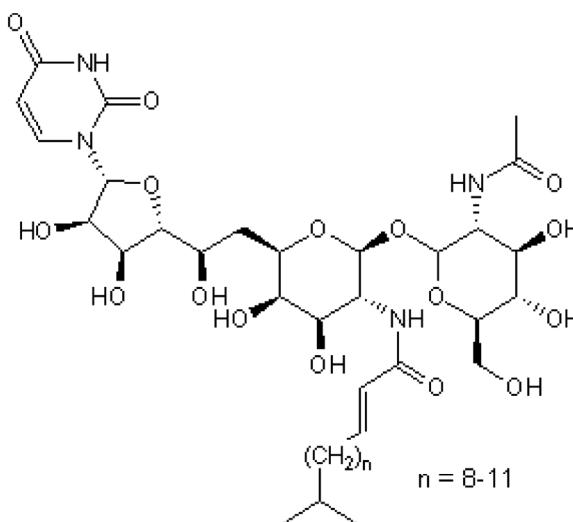
**Batch Molecular Weight:** 844.95

**Physical Appearance:** Off White solid

**Solubility:** DMSO to 50 mM

**Storage:** Store at +4°C

**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.9% purity

**Tunicamycin A:** 6.32%

**Tunicamycin B:** 34.83%

**Tunicamycin C:** 44.41%

**Tunicamycin D:** 14.32%

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

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**Description:**

Tunicamycin is an antibiotic; inhibits GlcNAc phosphotransferase (GPT). Blocks the formation of N-glycosidic linkages by inhibiting the first step in glycoprotein synthesis. Activity induces ER stress and causes G<sub>1</sub> arrest; can be used to induce autophagy. Tunicamycin contains four main components as follows: Homolog A, n=8, C<sub>37</sub>H<sub>60</sub>N<sub>4</sub>O<sub>16</sub>, molecular weight = 816.90 Homolog B, n=9, C<sub>38</sub>H<sub>62</sub>N<sub>4</sub>O<sub>16</sub>, molecular weight = 830.93 Homolog C, n=10, C<sub>39</sub>H<sub>64</sub>N<sub>4</sub>O<sub>16</sub>, molecular weight = 844.95 Homolog D, n=11, C<sub>40</sub>H<sub>66</sub>N<sub>4</sub>O<sub>16</sub>, molecular weight = 858.99 The composition of this product will vary from batch to batch and can be found on the relevant certificate of... Please see product specific page on www.tocris.com for full description.

**Physical and Chemical Properties:**

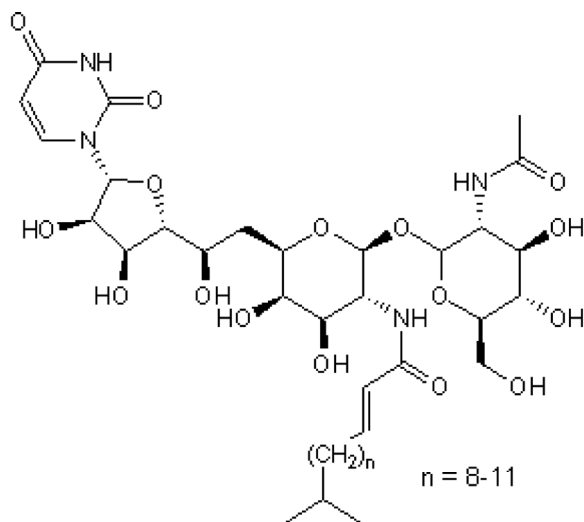
Batch Molecular Formula: C<sub>39</sub>H<sub>64</sub>N<sub>4</sub>O<sub>16</sub> (tunicamycin C, n=10)

Batch Molecular Weight: 844.95

Physical Appearance: Off White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**References:**

**Lauer et al (2009)** Primary murine airway smooth muscle cells exposed to poly(I:C) or tunicamycin synthesize a leukocyte-adhesive hyaluronan matrix. *J.Biol.Chem.* **284** 5299. PMID: 19088077.

**Duriez et al (2008)** The hepatitis B virus precore protein is retrotransported from endoplasmic reticulum (ER) to cytosol through the ER-associated pathway. *J.Biol.Chem.* **283** 32352. PMID: 18805786.

**Ding et al (2007)** Differential effects of endoplasmic reticulum stress-induced autophagy on cell survival. *J.Biol.Chem.* **282** 4702. PMID: 17135238.

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