**Product datasheet**

**Tunicamycin, Protein glycosylation inhibitor ab120296**

17 References 3 Images

### Overview

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>Tunicamycin, Protein glycosylation inhibitor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Antibiotic. Protein glycosylation inhibitor.</td>
</tr>
<tr>
<td><strong>Biological description</strong></td>
<td>Nucleoside antibiotic that inhibits protein glycosylation. Inhibits GlcNAc phosphotransferase (GPT) and inhibits the transfer of N-acetylg glucosamine-1-phosphate from UDP-N-acetylg glucosamine to dolichol phosphate in the first step of glycoprotein synthesis. Inhibits N-linked glycosylation and blocks the formation of N-glycosidic protein-carbohydrate linkages. Active <em>in vitro</em> against Gram-positive bacteria, yeasts, fungi and viruses.</td>
</tr>
<tr>
<td><strong>General notes</strong></td>
<td>This compound is a mixture of the homologs of tunicamycin: A, B, C and D which vary in the carbon chain length (n=8 to 11)</td>
</tr>
<tr>
<td><strong>CAS Number</strong></td>
<td>11089-65-9</td>
</tr>
<tr>
<td><strong>Chemical structure</strong></td>
<td><img src="image" alt="Chemical structure" /></td>
</tr>
</tbody>
</table>

### Properties

<table>
<thead>
<tr>
<th><strong>Molecular weight</strong></th>
<th>844.95</th>
</tr>
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<tbody>
<tr>
<td><strong>Molecular formula</strong></td>
<td>C\textsubscript{39}H\textsubscript{64}N\textsubscript{4}O\textsubscript{16} (for tunicamycin C, n = 10)</td>
</tr>
<tr>
<td><strong>PubChem identifier</strong></td>
<td>16220051</td>
</tr>
<tr>
<td><strong>Storage instructions</strong></td>
<td>Store at +4°C. Store under desiccating conditions. The product can be stored for up to 12 months.</td>
</tr>
<tr>
<td><strong>Solubility overview</strong></td>
<td>Soluble in DMSO to 50 mM</td>
</tr>
<tr>
<td><strong>Handling</strong></td>
<td>Wherever possible, you should prepare and use solutions on the same day. However, if you need to make up stock solutions in advance, we recommend that you store the solution as aliquots in tightly sealed vials at -20°C. Generally, these will be useable for up to one month. Before use, and</td>
</tr>
</tbody>
</table>
prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour.

Toxic, refer to SDS for further information.

Need more advice on solubility, usage and handling? Please visit our frequently asked questions (FAQ) page for more details.

**SMILES**

CC(C)CCCCCCCC/C=C/C(=O)N[C@@H]1[C@H][C@@H]([C@H][O[C@H]1O[C@H]2[C@H]([C@@H][C@H][O2]CO)O]O)NC(=O)C[C@H][C@@H]3[C@H][C@H][C@@H]((O3)N4C=CC(=O)NC4=O)O)O)O

**Source**

*Streptomyces sp.*

### Applications

**The Abpromise guarantee**

Our Abpromise guarantee covers the use of ab120296 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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<tr>
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<th>Abreviews</th>
<th>Notes</th>
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<tr>
<td>Functional Studies</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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### Images

2D chemical structure image of ab120296, Tunicamycin, Protein glycosylation inhibitor

Chemical Structure - Tunicamycin, Protein glycosylation inhibitor (ab120296)
All lanes: Anti-ATF-4 antibody [EPR18111] (ab184909) at 1/1000 dilution

Lane 1: Untreated HepG2 (Human liver hepatocellular carcinoma cell line) whole cell lysate (control)

Lane 2: HepG2 (Human liver hepatocellular carcinoma cell line) treated with 5 µM MG-132 (ab141003) and 3 µg/ml tunicamycin (ab120296) for 6 hours whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes: Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 50 kDa

Exposure time: 15 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.

The molecular weight observed is consistent with what has been described in the literature (PMID: 22095285).
ab11419 staining DDIT3 in HeLa (Human epithelial cell line from cervix adenocarcinoma) cells +/- Tunicamycin 1.5μM, 6 hours (ab120296).

The cells were fixed with 4% PFA (10 min), permeabilized with 0.1% Triton-X for 5 mins and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab11419 at 5μg/ml and ab6046, Rabbit polyclonal to beta Tubulin - Loading Control, at 1/1000 dilution. Cells were then incubated with ab150117, Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) at 1/1000 dilution (shown in green) and ab150084, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolor red). Nuclear DNA was labeled with DAPI (shown in blue).

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Please note: All products are “FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES, NOT FOR USE IN HUMANS”

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