

Certificate of Analysis

Product Name: TM 5441

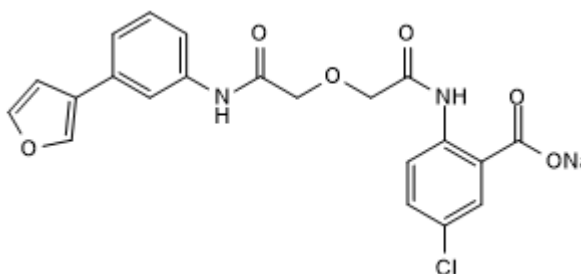
Catalog No.: 6194

Batch No.: 2

IUPAC Name: 5-Chloro-2-[[2-[2-[[3-(3-furanyl)phenyl]amino]-2-oxoethoxy]acetyl]amino]benzoic acid sodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₂₁ H ₁₆ ClN ₂ NaO ₆ .H ₂ O
Batch Molecular Weight:	468.82
Physical Appearance:	Light Beige solid
Solubility:	DMSO to 100 mM water to 5 mM with gentle warming
Storage:	Store at +4°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

HPLC:	Shows >98.7% purity
¹H NMR:	Consistent with structure
Mass Spectrum:	Consistent with structure
Microanalysis:	

	Carbon	Hydrogen	Nitrogen
Theoretical	53.8	3.87	5.98
Found	53.53	3.55	6.05

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

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Description:

Plasminogen activator inhibitor-1 (PAI-1) inhibitor (IC_{50} = 3.58 - 60.3 μ M). Increases apoptosis in human cancer cell lines. Reduces senescence and increases lifespan in mouse models of ageing (kl/kl). Inhibits L-NAME (Cat.No. 0665) induced systolic blood pressure increases, telomere length reduction and cardiac hypertrophy in mice. Renoprotective. Orally bioavailable.

Physical and Chemical Properties:

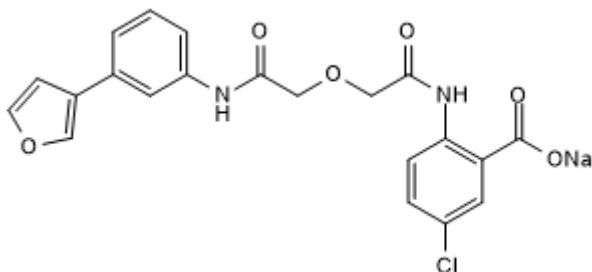
Batch Molecular Formula: $C_{21}H_{16}ClN_2NaO_6 \cdot H_2O$

Batch Molecular Weight: 468.82

Physical Appearance: Light Beige solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM

water to 5 mM with gentle warming

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:

Jeong et al (2016) Novel plasminogen activator inhibitor-1 inhibitors prevent diabetic kidney injury in a mouse model. *PLoS One*. **11**. PMID: 27258009 .

Placencio et al (2015) Small molecule inhibitors of plasminogen activator inhibitor-1 elicit anti-tumorigenic and anti-angiogenic activity. *PLoS One*. **10**. PMID: 26207899.

Eren et al (2014) PAI-1-regulated extracellular proteolysis governs senescence and survival in Klotho mice. *Proc.Natl.Acad.Sci.USA*. **111** 7090. PMID: 24778222 .

Boe et al (2013) Plasminogen activator inhibitor-1 antagonist TM5441 attenuates N^ω-nitro-L-arginine methyl ester-induced hypertension and vascular senescence. *Circulation*. **128** 2318. PMID: 24092817.

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bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel: +1 612 379 2956