SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

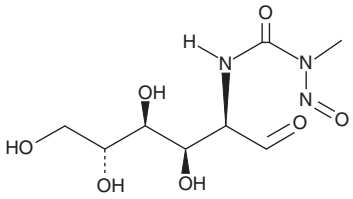
linkedin.com/company/szaboscandic

PRODUCT INFORMATION

Streptozotocin

Item No. 13104

CAS Registry No.:	18883-66-4
Formal Name:	2-deoxy-2-[[(methylnitrosoamino) carbonyl]amino]-D-glucose
Synonyms:	Estreptozocin, NSC 37917, NSC 85998, Streptozocin, STZ, U 9889
MF:	$C_8H_{15}N_3O_7$
FW:	265.2
Purity:	≥95% (mixture of isomers)
UV/Vis.:	λ_{max}: 229 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Streptozotocin (STZ) is supplied as a crystalline solid. A stock solution may be made by dissolving the STZ in the solvent of choice, which should be purged with an inert gas. STZ is soluble in organic solvents such as DMSO, dimethyl formamide (DMF), and 0.01 M sodium citrate. The solubility of STZ in these solvents is approximately 5 mg/ml in DMSO and DMF and approximately 30 mg/ml in 0.01 M sodium citrate.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of STZ can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of STZ in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

STZ is a glucosamine-nitrosourea which is commonly used to induce experimental diabetes in animals.[1,2] It specifically targets beta cells, entering *via* the glucose transporter GLUT2 and causing alkylation of DNA.[3,4] DNA damage induces activation of poly ADP-ribosylation, depletion of cellular NAD^+ and ATP, and formation of superoxide radicals, leading to the destruction of beta cells.[1] The effectiveness of STZ depends on the level of GLUT2 expression, which in turn may be influenced by age, sex, strain, or species.[2,5]

References

1. Szkudelski, T. The mechanism of alloxan and streptozotocin action in B cells of the rat pancreas. *Physiol. Res.* **50(6)**, 537-546 (2001).
2. Leiter, E.H. Multiple low-dose streptozotocin-induced hyperglycemia and insulitis in C57BL mice: Influence of inbred background, sex, and thymus. *Proc. Natl. Acad. Sci. USA* **79(2)**, 630-634 (1982).
3. Melmed, R.N., Benitez, C.J., and Holt, S.J. Intermediate cells of the pancreas. III. Selective autophagy and destruction of β-granules in intermediate cells of the rat pancreas induced by alloxan and streptozotocin. *J. Cell Sci.* **13(1)**, 297-315 (1973).
4. Bennett, R.A. and Pegg, A.E. Alkylation of DNA in rat tissues following administration of streptozotocin. *Cancer Res.* **41(7)**, 2786-2790 (1981).
5. Kramer, J., Moeller, E.L., Hachey, A., *et al.* Differential expression of GLUT2 in pancreatic islets and kidneys of New and Old World nonhuman primates. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* **296(3)**, R786-R793 (2009).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM