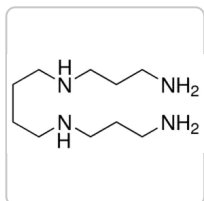


Saisir le nom du produit, le numéro de lot, etc.

[Toutes les photos \(1\)](#)

Documents

 [FDS](#) [COO/COA](#) [Fiche des caractéristiques](#)[Plus de documents](#) **S4264**  **Sigma-Aldrich.**

Spermine

★★★★★ (0)

suitable for cell culture, BioReagent

Synonyme(s):

N,N'-Bis(3-aminopropyl)-1,4-diaminobutane, Gerontine, Musculamine, Neuridine

Formule linéaire:

 $\text{NH}_2(\text{CH}_2)_3\text{NH}(\text{CH}_2)_4\text{NH}(\text{CH}_2)_3\text{NH}_2$ Numéro CAS: **71-44-3**

Poids moléculaire: 202.34

Beilstein: 1750791

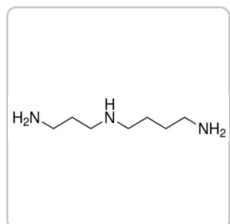
Numéro EC: **200-754-2**Numéro MDL: **MFCD00008215**ID de substance PubChem: **24899594**

NACRES: NA.75

Référence	Conditionnement	Disponibilité	Prix	Quantité
S4264-1G	1 G	 Disponible pour expédition le 10 octobre 2022 Détails...	65,00 €	- + 
S4264-5G	5 G	 Disponible pour expédition le 10 octobre 2022 Détails...	228,00 €	- + 

[Demander une commande en gros](#)[Ajouter au panier](#)

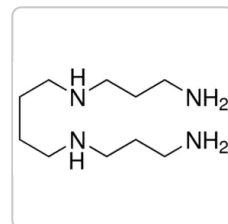
PRODUITS RECOMMANDÉS



Sigma-Aldrich

S0266**Spermidine**

BioReagent, for molecular biology, suitable for cell culture, ≥98%

[Consulter le prix et la disponibilité](#)

Sigma-Aldrich

S3256**Spermine**

≥97%

[Consulter le prix et la disponibilité](#)

PROPRIÉTÉS

Source biologique	microbial synthetic
Niveau de qualité	200
Gamme de produits	BioReagent
Essai/Dosage	≥96%
Forme	solid
technique(s)	cell culture mammalian: suitable
Point de bulle	150 °C/5 mmHg (lit.)

Pf	28-30 (lit.)
Solubilité	H ₂ O: 50 mg/mL
Temp. de stockage	2-8°C
SMILES string	[H]N(CCCN)CCCCN([H])CCCN
InChI	1S/C10H26N4/c11-5-3-9-13-7-1-2-8-14-10-4-6-12/h13-14H,1-12H2
InChI key	PFNFFQXMRSDOHW-UHFFFAOYSA-N
Gene Information	human ... GRIN2B(2904) rat ... Grin2a(24409)

Vous recherchez des produits similaires ? Visitez [Guide de comparaison des produits](#)

DESCRIPTION

Application

Spermine has been used:

- in the buffer, to swap the divalent cations in the MgSO₄ protocol to stabilize the integrity of the chromosomes
- in the preparation of modified mica surfaces from freshly cleaved mica surfaces
- to study its effects on survival in mice with sepsis and to estimate the role of spermine in lethal systemic inflammatory diseases

Actions biochimiques/physiologiques

Mixed NMDA glutamate receptor agonist/antagonist at the polyamine site. Neuroprotective effects have been observed at high concentrations (1 mM), while neurotoxicity is observed at lower concentrations. It enhances agonist effectiveness at the strychnine-insensitive glycine site. Plays a role in cellular proliferation and differentiation; inhibits neuronal nitric oxide synthase (nNOS).

Spermine together with putrescine and spermidine compose a family of polyamines (polycations) that are required for the growth and survival of the vast majority of living cells. Polyamines interact with negatively charged molecules such as proteoglycans, glycosylated proteins and nucleic acids (DNA and RNA). Biogenic polyamines are found to modulate protein synthesis at different levels. This effect may be explained by the ability of polyamines to bind and influence the secondary structure of tRNA, mRNA, and rRNA. Spermine also helps stabilize nucleic acid helical structure and the conformation of glycosylated proteins such as the histones. Spermine and spermidine are components of various nucleic acid transfection protocols.

Mixed NMDA glutamate receptor agonist/antagonist at the polyamine site. Neuroprotective effects have been observed at high concentrations (1 mM), while neurotoxicity is observed at lower concentrations. It enhances agonist effectiveness at the strychnine-insensitive glycine site. Plays a role in cellular proliferation and differentiation; inhibits neuronal nitric oxide synthase (nNOS).

PRODUITS APPARENTÉS

Produit Apparenté

P5780

Putrescine dihydrochloride, powder, BioReagent, suitable for cell culture

[View Pricing](#)

INFORMATIONS SUR LA SÉCURITÉ

Code de la classe de stockage

11 - Combustible Solids

WGK

WGK 3

Flash Point(F)

Not applicable

Point d'éclair C

Not applicable

Équipement de protection individuelle

Eyeshields, Faceshields,
Gloves, type P3 (EN 143)
respirator cartridges

DOCUMENTATION

Certificat d'analyse

Saisir un numéro de lot pour rechercher un certificat d'analyse (COA).

Numéro de lot

e.g. 023J5431

Comment saisir un numéro de lot (COA)

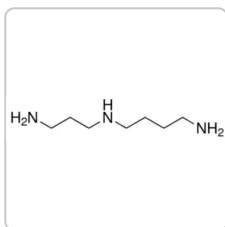
Rechercher

Certificat d'origine

Saisir un numéro de lot pour rechercher un certificat d'origine (COO).

Numéro de lot

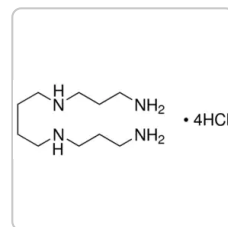
e.g. 023J5431

Comment saisir un numéro de lot (COO)**Rechercher****Plus De Documents**[FT-IR Condensed Phase](#)[FT-NMR Spectra](#)[Pressure-Temperature Nomograph](#)[Structure Search](#)[FDS](#)**LES CLIENTS ONT ÉGALEMENT CONSULTÉ**

Supelco

49761**Spermidine**

analytical standard

[Consulter le prix et la disponibilité](#)

Sigma-Aldrich

S2876**Spermine tetrahydrochloride**

powder or crystals

[Consulter le prix et la disponibilité](#)

ARTICLES REVUS PAR DES PAIRS

Fractionation of chromosome 15 with an affinity-based approach using magnetic beads

Vitharana S N and Wilson G S

Genomics, 87(1), 158-164 (2006)

Dong M, et al.

Journal of Immunology, 178(5), 3016-3022 (2007)

Soluble Vascular Adhesion Protein-1 Mediates Spermine Oxidation as Semicarbazide-Sensitive Amine Oxidase: Possible Role in Proliferative Diabetic Retinopathy.

Miyuki Murata et al.

Current eye research, 42(12), 1674-1683 (2017-09-25)

Purpose/Aim of the study: To explore the possible role of vascular adhesion protein-1 (VAP-1) via its enzymatic function as a semicarbazide-sensitive amine oxidase (SSAO) in the pathogenesis of proliferative diabetic retinopathy (PDR). The levels of soluble VAP-1/SSAO and the unsaturated

Spermidine and spermine exert protective effects within the lung.

Marcin Wawrzyniak et al.

Pharmacology research & perspectives, 9(4), e00837-e00837 (2021-07-22)

Asthma is a heterologous disease that is influenced by complex interactions between multiple environmental exposures, metabolism, and host immunoregulatory processes. Specific metabolites are increasingly recognized to influence respiratory inflammation. However, the role of protein-derived metabolites in regulating inflammatory responses in

Dextran-spermine polycation: an efficient nonviral vector for in vitro and in vivo gene transfection.

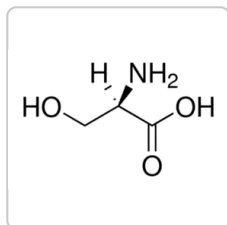
H Hosseinkhani et al.

Gene therapy, 11(2), 194-203 (2004-01-09)

Dextran-spermine cationic polysaccharide was prepared by means of reductive amination between oxidized dextran and the natural oligoamine spermine. The formed Schiff-base imine-based conjugate was reduced with borohydride to obtain the stable amine-based conjugate. The transfection efficiency of the synthetic dextran-spermine

[Afficher tous les articles scientifiques apparentés](#)

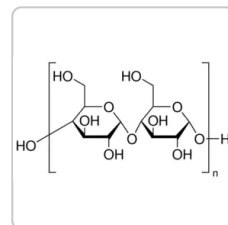
PRODUITS CONSULTÉS RÉCEMMENT



Sigma-Aldrich

S4250**D-Serine**

≥98% (TLC)

[Consulter le prix et la disponibilité](#)

Sigma-Aldrich

S4251**Starch from potato**

Powder

[Consulter le prix et la disponibilité](#)

Évaluations

[Soyez le premier à donner votre avis sur ce produit](#)

Questions

[Soyez le premier à poser une question](#)

SERVICE TECHNIQUE

Notre équipe de scientifiques dispose d'une expérience dans tous les secteurs de la recherche, notamment en sciences de la vie, science des matériaux, synthèse chimique, chromatographie, analyse et dans de nombreux autres domaines..

[Contacter notre Service technique](#)

Le contenu de cette page vous a-t-il été utile ?*



Que pouvons-nous faire pour améliorer cette page spécifique de notre site Internet ?

Envoyer