3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

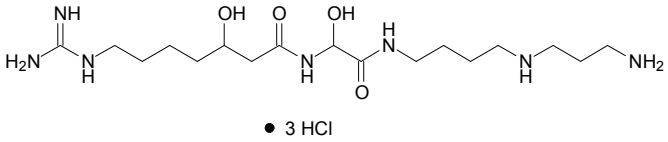
Spergualin trihydrochloride
from *Bacillus laterosporus*

Catalog Number **S5822**
Storage Temperature –20 °C

CAS RN 80952-47-2

Product Description

Molecular formula: $C_{17}H_{37}N_7O_4 \cdot 3HCl$
Molecular weight: 512.9



Spergualin is an antibiotic isolated from *Bacillus laterosporus* that posses antibacterial,[1] antitumor,[1,2] and strong immunosuppressive properties.[3-5] Spergualin exhibits antitumor activity against transplantable leukemias in mice such as lymphatic leukemia L1210, monocytic leukemia P388, mastocytoma P815, or thymoma EL-4.[1,2]

Spergualin was found effective in inhibiting skin graft rejection,[3] preventing GVHD (Graft-Versus-Host-Disease) in mice recipients of allogeneic bone marrow and spleen cells,[4] and modulating other immunologic diseases.[5] One of its derivates, 15-deoxyspergualin was approved in Japan for the treatment of acute rejection in renal transplantation.[6]

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Spergualin is very soluble in water and methanol. It is slightly or not soluble in ethanol, ethyl acetate, acetone, cyclohexane, and other organic solvents.

Storage/Stability

Store desiccated at –20 °C. Under these conditions the product is stable for 2 years. The powder is highly hygroscopic.

A 10 mg/mL solution in water, is stable for 2 years at –20 °C (as determined by HPLC).

Spergualin solutions are unstable at acidic pH (pH <2) and at alkaline pH (pH >9).

References

1. Takeuchi, T., et al., A new antitumor antibiotic, spergualin: isolation and antitumor activity. *J. Antibiot.*, **34**, 1619-1621 (1981).
2. Nishikawa, K., et al., Antitumor activity of spergualin, a novel antitumor antibiotic. *J. Antibiot.*, **39**, 1461-1466 (1986).
3. Umezawa, H., et al., Suppression of tissue graft rejection by spergualin. *J. Antibiot.*, **38**, 283-284 (1985).
4. Nemoto, K., et al., Effects of spergualin and 15-deoxyspergualin on the development of graft-versus-host disease in mice. *Transplant. Proc.*, **19**, 3520-3521 (1987).
5. Nemoto, K., et al., Suppression of experimental allergic encephalomyelitis in guinea pigs by spergualin and 15-deoxyspergualin. *J. Antibiot.*, **40**, 1193-1194 (1987).
6. Krieger, N.R. and Emre, S., Novel immuno-suppressants. *Pediatr. Transplant.*, **8**, 594-599 (2004).

KAA,SSL,MAM 10/07-1