# PRODUCT INFORMATION

## D-Lysine lactam

*Item No. 31684*

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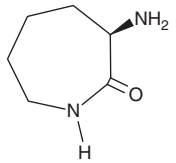
| **CAS Registry No.:** | 28957-33-7 |
| **Formal Name:** | (3R)-3-aminohexahydro-2H-azepin-2-one |
| **Synonym:** | (+)-α-Amino-ε-caprolactam |
| **MF:** | $C_6H_{12}N_2O$ |
| **FW:** | 128.2 |
| **Purity:** | ≥95% |
| **Supplied as:** | A neat oil |
| **Storage:** | -20°C |
| **Stability:** | ≥4 years |




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

### Laboratory Procedures

D-Lysine lactam is supplied as a neat oil. A stock solution may be made by dissolving the D-lysine lactam in the solvent of choice, which should be purged with an inert gas. D-Lysine lactam is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of D-lysine lactam in these solvents is approximately 30 mg/ml.

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 D-lysine lactam can be prepared by directly dissolving the neat oil in aqueous buffers. The solubility of D-lysine lactam in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

D-Lysine lactam is a chiral building block.[1,2] It has been used in the synthesis of a chiral antibiotic synthetic intermediate, as well as in the stereoselective synthesis of neurokinin (NK) receptor antagonists.

### References


1. Kumar, A., Bhashkar, B., Bhavsar, J., *et al*. Catalytic reduction: Efficient synthesis of chiral key intermediate of besifloxacin hydrochloride. *Der Pharma Chemica* **7(9)**, 297-300 (2015).
2. Gerspacher, M., Lewis, C., Ball, H.A., *et al*. Stereoselective preparation of N-[(R,R)-(E)-1-(3,4-dichlorobenzyl)-3-(2-oxoazepan-3-yl)carbamoyl]allyl-N-methyl-3,5-bis(trifluoromethyl)benzamide, a potent and orally active dual neurokinin $NK_1/NK_2$ receptor antagonist. *J. Med. Chem.* **46(16)**, 3508-3513 (2003).





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