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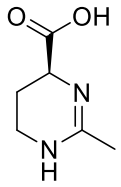
PRODUCT DATA SHEET

Ectoine

Code No.: **BIA-E2230**

Pack sizes: **5 mg, 25 mg**



Synonyms : NSC 614616, Pyrostatin B, Pyrostatine B, (4S)-2-Methyl-3,4,5,6-tetrahydropyrimidine-4-carboxylic acid

Specifications

CAS #	:	**96702-03-3**
Molecular Formula	:	**$C_6H_{10}N_2O_2$**
Molecular Weight	:	**142.2**
Source	:	***Brevibacterium linens***
Appearance	:	**White solid**
Purity	:	**>95% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in methanol or DMSO.**

Application Notes

Ectoine is a cyclic amino acid isolated from halophototrophic bacteria of the genus Ectothiorhodospira. Ectoine is a zwitterion which can act as a substrate of the E. coli transporter ProP. Ectoine is cytoprotective, reducing claudin 2 expression in inflammatory bowel disease and inhibiting loss of ZO-1 and occludin and preventing IFN-γ/TNF-α-induced paracellular flux of 4 kDa FITC-dextran in vitro. Ectoine reduces expression of pro-inflammatory cytokines and oxidative stress during colitis.

References

1. The ion coupling and organic substrate specificities of osmoregulatory transporter ProP in Escherichia coli. MacMillan S.V. et al. Biochim Biophys Acta 1999, 1420, 30.
2. Homoectoine protects against colitis by preventing a claudin switch in epithelial tight junctions. Castro-Ochoa K.F. et al. Dig Dis Sci. 2019, 64, 409.

For in vitro laboratory use only. Not for human or animal use.

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