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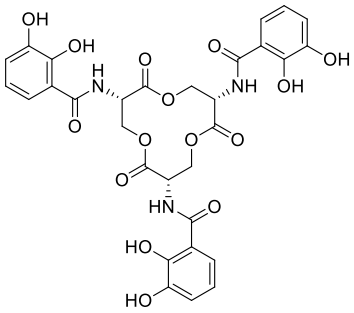
PRODUCT DATA SHEET

Enterobactin

Code No.: **BIA-E2285**

Pack sizes: **0.1 mg, 0.5 mg**



Synonyms : Enterochelin, Enterochellin

Specifications

CAS #	:	**28384-96-5**
Molecular Formula	:	**$C_{30}H_{27}N_3O_{15}$**
Molecular Weight	:	**669.55**
Source	:	***Streptomyces* sp.**
Appearance	:	**Orange-brown solid**
Purity	:	**>95% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in methanol or DMSO**

Application Notes

Enterobactin is a catechol-type siderophore primarily found in Gram-negative bacteria that transports and sequesters iron in bacteria. It has very extremely high affinity for ferric ions (K = 1052 10-1M). Ferric enterobactin complexes are recognised by outer-membrane transporters and imported into the periplasm in a process dependent on the inner-membrane protein TonB. In E. coli, enterobactin binds to the periplasmic protein, FepB. Enterobactin is a dimer of 2,3-dihydroxybenzoic acid.

References

1. Enterobactin, an iron transport compound from Salmonella typhimurium.Pollack J.R. and Neilands J.B. Biochem Biophys Res Comm. 1970, 68, 2870.
2. The structure of enterochelin and related 2,3-dihydroxy-N-benzoyne conjugates from Eschericha Coli. O'Brien I.G. and Gibson T. Biochim Biophys Acta 1970, 215, 393.
3. Ferric ion sequestering agents. 2. Kinetics and mechanism of iron removal from transferrin by enterobactin and synthetic tricatechols. Carrano C.J. and Raymond K.N. J Am Chem Soc. 1979, 101, 5401.
4. The complex of ferric-enterobactin with its transporter from Pseudomonas aeruginosa suggests a two-site model. Moynié L. et al. Nature Comm. 2019, 10, 3673.
5. Binding of ferric enterobactin by the Escherichia coli periplasmic protein FepB. Sprencel C. et al. J Bacteriol. 2000, 182, 5359.

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