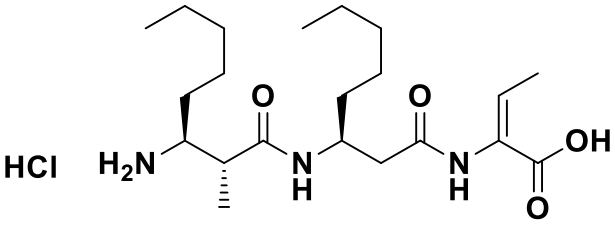
PRODUCT DATA SHEET

Dioctatin A (hydrochloride)

(Human dipeptidyl aminopeptidase II inhibitor, Aflatoxin production inhibitor)



Specifications

Code No.	: 14700
CAS#	: Not applicable *
Parent CAS#	: 138146-67-5 (salt free form)
Molecular Formula	: $C_{21}H_{39}N_3O_4$ HCl
Molecular Weight	: 434.018
Source	: *Streptomyces* sp.
Supplied as	: Powder, hydrochloride salt
Purity	: >95% (HPLC)
Long Term Storage	: at -20 °C
Solubility	: Soluble in acidic DMSO, acidic water, acidic MeOH

* CAS number 138146-67-5 is the salt free form of dioctatin A. The dioctatin A we supply is the more soluble hydrochloride salt form of which CAS number has not been given yet.

Application Notes

Dioctatin A was isolated from the fermentation broth of *Streptomyces* sp. SA-2581 as a selective inhibitor of dipeptidyl aminopeptidase II (IC_{50}: 0.19 µg/ml, rat pancreas).[1,2] It was found that dioctatin A strongly inhibited aflatoxin production by *Aspergillus parasiticus*, with an IC_{50} value of 4.0 µM.[3] A devinyl derivative of dioctatin A, dioctatin, also inhibited the aflatoxin production, and the target of dioctatin was identified as mitochondrial protease ClpP.[4]

References

1) Novel aminopeptidase-inhibiting dioctatins and their manufacture with *Streptomyces* species. Takeuchi T , *et al.* Jpn Patent 1991 JP03077857 A1
2) Aflatoxin production inhibitor, and method for control of aflatoxin poisoning using the same. Sakuda S, *et al.* US Patent 2010 US2010/0063150 A1
3) Dioctatin A is a strong inhibitor of aflatoxin production by *Aspergillus parasiticus*. Yoshinari T, *et al. Microbiology* 2007 **153**(8) 2774-2780.
4) Dioctatin activates ClpP to degrade mitochondrial components and inhibits aflatoxin production. Furukawa T, *et al. Cell Chem Biol*. 2020 **27**(11) 1396-1409.

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