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## DATASHEET

Ceftriaxone disodium salt

### Product overview

|                    |                                                       |
|--------------------|-------------------------------------------------------|
| <b>Name</b>        | Ceftriaxone disodium salt                             |
| <b>Cat No</b>      | HB0176                                                |
| <b>Purity</b>      | >98%                                                  |
| <b>Description</b> | $\beta$ -lactam antibiotic. Increases EAAT2 activity. |

### Images



### Biological Data

|                               |                                                                                                                                                                                                                                                                    |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Biological description</b> | $\beta$ -lactam antibiotic. Increases EAAT2 expression and EAAT2 biochemical and functional activity. Potentially reduces glutamergic toxicity. Shows neuroprotective actions in neurodegenerative disease models and antinociceptive effects in neuropathic pain. |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Solubility & Handling

|                             |                                                                                                                               |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage instructions</b> | +4 °C                                                                                                                         |
| <b>Solubility overview</b>  | Soluble in DMSO (50 mM)                                                                                                       |
| <b>Important</b>            | This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use. |

### Chemical Data

|                           |                                                                                                                                                                                                                       |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Chemical name</b>      | 7-[[[(2Z)-2-(2-Amino-4-thiazolyl)-2-(methoxyimino)acetyl]amino]-8-oxo-3-[[[(1,2,5,6-tetrahydro-2-methyl-5,6-dioxo-1,2,4-triazin-3-yl)thio]methyl]-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid disodium salt |
| <b>Molecular Weight</b>   | 598.54                                                                                                                                                                                                                |
| <b>Chemical structure</b> |                                                                                                                                                                                                                       |
| <b>Molecular Formula</b>  | $C_{18}H_{16}N_8Na_2O_7S_3$                                                                                                                                                                                           |
| <b>CAS Number</b>         | 74578-69-1                                                                                                                                                                                                            |
| <b>PubChem identifier</b> | 9570985                                                                                                                                                                                                               |
| <b>SMILES</b>             | <chem>CN1C(=NC(=O)C(=N1)[O-])SCC2=C(N3[C@@H]([C@@H](C3=O)NC(=O)/C(=N\OC)/C4=CSC(=N4)N)SC2)C(=O)[O-].[Na+].[Na+]</chem>                                                                                                |
| <b>InChiKey</b>           | YOBPSXOHCHDCMU-VKZZUTNHSAL                                                                                                                                                                                            |

|                      |                                                                                                                                                                                                                       |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Chemical name</b> | 7-[[[(2Z)-2-(2-Amino-4-thiazolyl)-2-(methoxyimino)acetyl]amino]-8-oxo-3-[[[(1,2,5,6-tetrahydro-2-methyl-5,6-dioxo-1,2,4-triazin-3-yl)thio]methyl]-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid disodium salt |
| <b>MDL number</b>    | MFCD01750405                                                                                                                                                                                                          |
| <b>Appearance</b>    | White to off-white                                                                                                                                                                                                    |

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## References

### Ceftriaxone mediated rescue of nigral oxidative damage and motor deficits in MPTP model of Parkinson's disease in rats.

Bisht R *et al* (2014) Neurotoxicology 44

**PubMedID** [25053526](#)

### Ceftriaxone, a beta-lactam antibiotic, modulates apoptosis pathways and oxidative stress in a rat model of neuropathic pain.

Amin B *et al* (2014) Biomed Res Int 2014

**PubMedID** [25028668](#)

### Mechanism of ceftriaxone induction of excitatory amino acid transporter-2 expression and glutamate uptake in primary human astrocytes.

Lee SG *et al* (2008) J Biol Chem 283(19)

**PubMedID** [18326497](#)

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