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| Product Name: | Cyclosporin, USP |
| Product Number: | C092 |
| CAS Number: | 59865-13-3 |
| Molecular Formula: | $C_{62}H_{111}N_{11}O_{12}$ |
| Molecular Weight: | 1202.61 |
| Form: | Powder |
| Appearance: | White crystalline powder |
| Solubility: | soluble in DMSO and ethanol |
| Storage Conditions: | 2-8 °C |
| Description: | <p>Cyclosporin, USP is a mixture of cyclic oligopeptide compounds first isolated from the fungus <i>Tolypocladium inflatum</i>. The compound inhibits T cell proliferation and thus has immunosuppressive activity. Cyclosporin is composed of over 98% Cyclosporin A which has the most potent immunosuppressive activity. It is soluble in DMSO and ethanol.</p> <p>TOKU-E offers purified forms of <u>cyclosporin A, B, C, D, E, and H</u>.</p> |
| Mechanism of Action: | <p>After entering a T-cell, Cyclosporin A associates with cytosolic cyclophilins which help in protein folding. Cyclosporin A binds to cyclophilin and this complex binds another cytosolic protein phosphatase called Calcineurin (protein phosphatase 2B) that dephosphorylates a transcription factor (nuclear factor of activated T-cells, or NF-AT) which is needed for expression of interleukin 2 (IL-2.). It also blocks the pathway to nitric oxide synthesis via tumor necrosis factor (TNFa) and Interleukin 1a.</p> |
| Cancer Applications | <p>Cyclosporins can be used to study toxicity, interactions with other compounds, and immunosuppressive activity <i>in vitro</i>.</p> |

References:

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