



Data Sheet

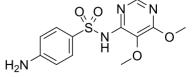
Product Name: Sulfadoxine
Cat. No.: CS-2545
CAS No.: 2447-57-6
Molecular Formula: C12H14N4O4S

Molecular Weight: 310.33
Target: Parasite

Pathway: Anti-infection

Solubility: DMSO : ≥ 100 mg/mL (322.24 mM); H2O : < 0.1 mg/mL

(insoluble)



BIOLOGICAL ACTIVITY:

Sulfadoxine(Sulphadoxine) is a long acting sulfonamide that is used, usually in combination with other drugs, for respiratory, urinary tract and malarial infections. Target: Antiparasitic Sulfadoxine(Sulphadoxine) is an ultra-long-lasting sulfonamide. Sulfadoxine is often used in combination with pyrimethamine to treat or prevent malaria. Both drugs are antifolates; they inhibit the production of enzymes involved in the synthesis of folic acid within the parasites. Either drug by itself is only moderately effective in treating malaria, because the parasite Plasmodium falciparum may be able to use exogenous folic acid, i.e. folic acid which is present in the parasite's environment, while in combination, the two substances have a synergistic effect which outbalances that ability [1, 2].

References:

- [1]. http://www.malaria-ipca.com/sulphadoxine_pyrimethamine.html
- [2]. http://en.wikipedia.org/wiki/Sulfadoxine/pyrimethamine

CAIndexNames:

Benzenesulfonamide, 4-amino-N-(5,6-dimethoxy-4-pyrimidinyl)-

SMILES:

 $\mathsf{O} \! = \! \mathsf{S}(\mathsf{NC1} \! = \! \mathsf{NC} \! = \! \mathsf{NC}(\mathsf{OC}) \! = \! \mathsf{C1OC})(\mathsf{C2} \! = \! \mathsf{CC} \! = \! \mathsf{C}(\mathsf{N})\mathsf{C} \! = \! \mathsf{C2}) \! = \! \mathsf{O}$

Caution: Product has not been fully validated for medical applications. For research use only.

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