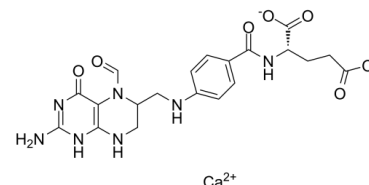


## Data Sheet

<b>Product Name:</b>	Folinic acid (calcium)
<b>Cat. No.:</b>	CS-1363
<b>CAS No.:</b>	1492-18-8
<b>Molecular Formula:</b>	C <sub>20</sub> H <sub>21</sub> CaN <sub>7</sub> O <sub>7</sub>
<b>Molecular Weight:</b>	511.50
<b>Target:</b>	Antifolate; Endogenous Metabolite
<b>Pathway:</b>	Cell Cycle/DNA Damage; Metabolic Enzyme/Protease
<b>Solubility:</b>	H <sub>2</sub> O : ≥ 200 mg/mL (391.01 mM)



### BIOLOGICAL ACTIVITY:

Folinic acid calcium (Leucovorin calcium) is a biological folic acid and is generally administered along with methotrexate (MTX) as a rescue agent to decrease MTX-induced toxicity<sup>[1]</sup>. **In Vitro:** MTX alone induces a concentration-related increase in % micronucleated binucleated cells (MNBN) and % aberrant cells (Abs). There is a decrease in nuclear division index (NDI) with increase in MTX concentration. Similarly, the mitotic index (MI) also decreases in all concentrations of MTX tested. The addition of Folinic acid at 50 µg/mL significantly reduces % MNBN (40-68%) and % Abs (36-77%). Inhibition is also seen at 5 µg/mL Folinic acid (12 to 54% for MNBN and 20 to 61% for Abs) <sup>[1]</sup>. **In Vivo:** Folinic acid (7.0 mg/kg; intraperitoneal injection; every second day; for 3 weeks; Balb/c young growing male mice) treatment following methotrexate (MTX) administration appears to reverse this growth inhibition (Chronic administration of MTX induces suppression of skeletal growth in mice)<sup>[2]</sup>.

### References:

[1]. Keshava C, et al. Inhibition of methotrexate-induced chromosomal damage by folinic acid in V79 cells. *Mutat Res.* 1998 Feb 2;397(2):221-8.

[2]. Iqbal MP, et al. Effect of methotrexate and folinic acid on skeletal growth in mice. *Acta Paediatr.* 2003 Dec;92(12):1438-44.

### CAIndexNames:

L-Glutamic acid, N-[4-[[[(2-amino-5-formyl-1,4,5,6,7,8-hexahydro-4-oxo-6-pteridiny)methyl]amino]benzoyl]-, calcium salt (1:1)

### SMILES:

O=C(N[C@H](C([O-])=O)CCC([O-])=O)C(C=C1)=CC=C1NCC(N2C=O)CNC3=C2C(N=C(N)N3)=O.[Ca+2]

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

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