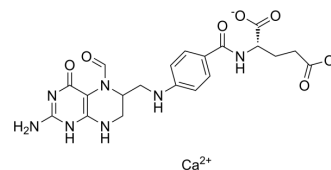


Folinic acid calcium

Cat. No.:	HY-13664
CAS No.:	1492-18-8
Molecular Formula:	C ₂₀ H ₂₁ CaN ₇ O ₇
Molecular Weight:	511.5
Target:	Antifolate; Endogenous Metabolite
Pathway:	Cell Cycle/DNA Damage; Metabolic Enzyme/Protease
Storage:	4°C, sealed storage, away from moisture and light * The compound is unstable in solutions, freshly prepared is recommended.



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 50 mg/mL (97.75 mM; Need ultrasonic)				
		Mass			
		Solvent Concentration	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	1.9550 mL	9.7752 mL	19.5503 mL
		5 mM	0.3910 mL	1.9550 mL	3.9101 mL
10 mM		0.1955 mL	0.9775 mL	1.9550 mL	
Please refer to the solubility information to select the appropriate solvent.					

BIOLOGICAL ACTIVITY

Description	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 ^[1] .
IC₅₀ & Target	Human Endogenous Metabolite
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) ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
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) ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	24 Balb/c young growing male mice aged 3 weeks (11.88 ± 0.25 g) ^[2]
Dosage:	7.0 mg/kg
Administration:	Intraperitoneal injection; every second day; for 3 weeks
Result:	Following methotrexate (MTX) administration appears to reverse this growth inhibition.

CUSTOMER VALIDATION

- JAMA Oncol. 2022 Jan 1;8(1):e215445.
- Nat Commun. 2020 Apr 14;11(1):1792.
- EBioMedicine. 2024 Mar 13;102:105041.
- NPJ Precis Oncol. 2023 Dec 8;7(1):128.
- Mol Oncol. 2020 Nov;14(11):2894-2919.

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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.

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

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