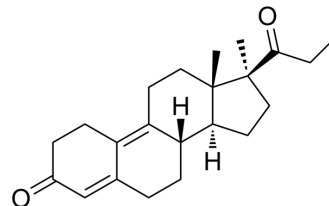


Promegestone

Cat. No.:	HY-119384		
CAS No.:	34184-77-5		
Molecular Formula:	C ₂₂ H ₃₀ O ₂		
Molecular Weight:	326.47		
Target:	Progesterone Receptor		
Pathway:	Vitamin D Related/Nuclear Receptor		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



BIOLOGICAL ACTIVITY

Description	Promegestone (R-5020), a progestin, is a potent progesterone receptor (PR) agonist. Promegestone has the potential for endocrine regulation and cancer research ^[1] .
In Vitro	<p>Promegestone (R-5020; 1 nM) is efficient ligand with a full agonist response profile and a low EC₅₀ of 0.33 nM) in HELN-hPR while it only partially induced luciferase activity in U2OS-zfPR (EC₅₀=1.93 nM)^[1].</p> <p>Promegestone is inactive in HELN cells that express luciferase but no functional receptor^[1].</p> <p>Promegestone (10 nM) robustly stimulates SLC37A2 expression in cells expressing SUMO-deficient PR, but not in cells expressing WT PR in T47D cell models^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
In Vivo	<p>Promegestone (R-5020; 8 mg/kg; intramuscularly)-treated pregnant mice on day 18 postbreeding has the least deterioration in extracellular collagen (lowest OD) and highest cell density compared to other groups on the day before birth^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

- [1]. Clémentine Garoche, et al. Human and Zebrafish Nuclear Progesterone Receptors Are Differently Activated by Manifold Progestins. *Environ Sci Technol.* 2020 Aug 4;54(15):9510-9518.
- [2]. Michael A Kirby, et al. Progesterone Receptor-Mediated Actions Regulate Remodeling of the Cervix in Preparation for Preterm Parturition. *Reprod Sci.* 2016 Nov;23(11):1473-1483.
- [3]. Todd P Knutson, et al. Posttranslationally modified progesterone receptors direct ligand-specific expression of breast cancer stem cell-associated gene programs. *J Hematol Oncol.* 2017 Apr 17;10(1):89.

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

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