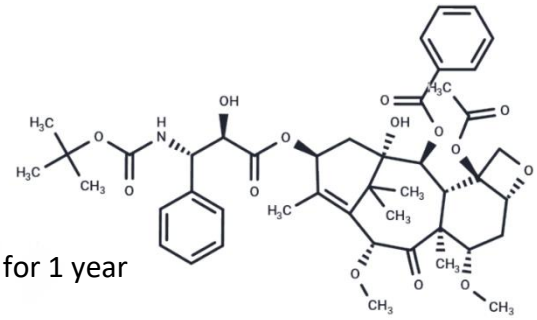
Cabazitaxel [183133-96-2]

#Cat: NB-64-14643-1ml Size: 1ml
#Cat: NB-64-14643-20mg Size: 20mg

Chemical Properties



Cas No: 183133-96-2
Formula: $C_{45}H_{57}NO_{14}$
Molecular weight: 835.93
Appearance: no data available
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Cabazitaxel (taxoid XRP6258) is a taxane and antineoplastic agent which is currently used in the therapy of castration-resistant metastatic prostate cancer after failure of docetaxel.
Targets(IC_{50})	Microtubule Associated, Autophagy
In vitro	In situ and subcutaneous mouse xenografts were generated using SF-295 and U251 human glioblastoma cell lines. Treatment with Cabazitaxel resulted in the complete regression of the majority of subcutaneously implanted tumors. Cabazitaxel also demonstrated significant antitumor activity in other related models. Specifically, Cabazitaxel led to complete tumor regression in mouse tumor xenograft models (colon C38 and pancreatic P03). Moreover, in the in-situ model, Cabazitaxel caused complete regression in 4 out of 10 U251 tumors.
In vivo	Cabazitaxel has an average in vitro human plasma protein binding rate of 91.6%. It is rapidly and extensively metabolized into various metabolites. Cabazitaxel exhibits activity in multiple resistant cell lines in both mice and humans, and it increases the enzymatic activity of CYP3A in rat liver cells. Additionally, Cabazitaxel demonstrates high antitumor activity in three colon cancer cell lines (HCT-116, HCT-8, and HT-29). Treating with relatively low concentrations of Cabazitaxel for four days results in significant cytotoxicity.
Cell Research	The cytotoxicity of CBX-loaded ANs and free Cabazitaxel (CBX) is evaluated with MTT assay. Cells are seeded onto a 96-well plate at a density of 3000 cells per well and cultured for 24 h. CBX-loaded ANs and free CBX are diluted to predetermined concentrations with PBS and added into each well. Blank AN, AN-ICG and free CBX solvent (a mixture of Tween-80 and anhydrous alcohol) are added as well to different final concentrations. The incubation continued for another 48 hours. 20 μL MTT solutions (5 mg/mL in PBS) are added into each well and cells are incubated for another 4 hours under 37°C. Subsequently the medium is removed and 150 μL dimethyl sulphoxide (DMSO) is added to dissolve the purple formazan salt crystals. Then the absorbance is measured by a microplate reader at 490 nm. The cells treated with medium are evaluated as controls.

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Solubility Information

Solubility	H_2O: 1 mg/mL (insoluble or slightly soluble), Ethanol: 1 mg/mL (insoluble or slightly soluble), DMSO: 93 mg/mL (111.3 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.1963 mL	5.9814 mL	11.9627 mL
5 mM	0.2393 mL	1.1963 mL	2.3925 mL
10 mM	0.1196 mL	0.5981 mL	1.1963 mL
50 mM	0.0239 mL	0.1196 mL	0.2393 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

EMEA/H/C/002018, 2011.
Zhang W, Sun R, Zhang Y, et al. Cabazitaxel suppresses colorectal cancer cell growth via enhancing the p53 anti-