Data Sheet (Cat.No.T77371)

TargetMol

Mapatumumab

Chemical Properties

CAS No. : 658052-09-6

Formula:

Molecular Weight: 143.52 kDa

Storage: Store at low temperature
-20°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Mapatumumab (HGS-ETR1) is a fully human agonistic monoclonal antibody targeting the TNF-related apoptosis-inducing ligand receptor 1 (TRAIL-R1). Mapatumumab exhibits anticancer activity, primarily by inducing tumor cell death through the activation of the death receptor-mediated apoptosis pathway. Mapatumumab is intended for use in cancer research.
Targets(IC50)	Others
In vitro	Mapatumumab (0.01-100 μg/mL) exhibited very limited activity against 23 PPTP cell lines cultured in vitro; none of the cell lines showed 50% growth inhibition. [1] Treatment of bladder cancer cells with Mapatumumab (1-100 ng/mL) and EPI (0.1-10 μg/mL) for 24 hours significantly enhanced cytotoxicity and demonstrated synergistic effects. Mapatumumab (100 ng/mL) does not activate caspase-8, caspase-9, or caspase-3 in T24 cells. [2] Methods: Colorectal cancer (Colo205, HCT116), non-small cell lung cancer (H2122), and renal cancer cells (A498) were treated with Mapatumumab (0.01, 0.1, 1, 10, 100 μg/mL) for 48 h, and cell viability was assessed using CellTiter-Glo; Caspase-3/7 activity was detected using a fluorescence assay. Results: Mapatumumab specifically binds to TRAIL-R1, dose-dependently inhibits tumor cell viability, and activates both intrinsic and extrinsic apoptotic pathways.[4]
In vivo	Mapatumumab (10 mg/kg, intraperitoneal administration, twice weekly for six weeks) demonstrated excessive toxicity in two neuroblastoma xenograft models (NB-1643 and NB-SD). [1] Methods: A Colo205 colorectal cancer NMRI-nu/nu nude mouse xenograft model was established; When tumor volume reached 115 ± 29 mm^3, Mapatumumab was administered intraperitoneally at 10 mg/kg (on days 1, 4, and 8), combined with fractionated radiotherapy (5 × 3 Gy on days 1-5) plus a gradient boost of 0-44.2 Gy on day 8. The study was conducted under both normoxic and hypoxic conditions, with a 270-day follow-up. Tumor volume was monitored using a caliper, and the local tumor control rate was calculated. Results: The combination of Mapatumumab and radiotherapy significantly prolonged the tumor doubling time and substantially improved the local tumor control rate, with no obvious acute toxicity and good safety. [3]

In vivo	Methods: Nude mouse xenograft models were established using Colo205 (colorectal cancer), H2122 (NSCLC), and A498 (renal cell carcinoma). When tumor volume reached 100 mm^3, Mapatumumab (2.5, 10 mg/kg) was administered intravenously, and tumor volume was monitored using a caliper. Results: Mapatumumab monotherapy significantly induced tumor regression and inhibited tumor growth; the 10 mg/kg dose group demonstrated highly significant antitumor effects.[4]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.007 mL	0.0348 mL	0.0697 mL
5 mM	0.0014 mL	0.007 mL	0.0139 mL
10 mM	0.0007 mL	0.0035 mL	0.007 mL
50 mM	0.0001 mL	0.0007 mL	0.0014 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.