Data Sheet (Cat.No.T9901A-227)

TargetMol

IMC-2C5

Chemical Properties

CAS No. :

Formula:

Molecular Weight: 145.06 kDa

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

Biological Description

Description	IMC-2C5 is a humanized antibody targeting PDGFRB/CD140b. IMC-2C5 binds with high affinity to PDGFRβ and blocks its signaling pathway, thereby inhibiting tumor angiogenesis and stromal support, and exerting antitumor effects. IMC-2C5 is suitable for use in tumor research.
Targets(IC50)	PDGFR
In vitro	Methods: Caki-1, NIH/3T3, and D122 cells were preincubated at room temperature for 30 minutes with IMC-2C5 at gradient concentrations (4, 12, 50, and 133 nM), followed by stimulation with PDGF-B (20 ng/mL) at 37°C for 15 minutes; After cell lysis, perform immunoprecipitation for PDGFRβ, and use Western blot to detect phosphorylated PDGFRβ, total PDGFRβ, as well as downstream phosphorylated Akt, p44/42 MAPK, and total protein levels. Results: IMC-2C5 dose-dependently inhibited PDGF-B-induced PDGFRβ phosphorylation; a concentration of 12 nM completely blocked receptor activation in Caki-1 cells. It also significantly inhibited the phosphorylation of downstream Akt and p44/42 MAPK, thereby blocking pro-proliferation and survival signaling. [1] Methods: PDGFRβ-positive cells, including NCI-H460 and OVCAR-8, were cultured in Boyden chambers. 30 ng/mL PDGF-B was added as a chemotactic factor, and IMC-2C5 (12 nM) was added simultaneously. After routine culture, the number of cells that migrated through the membrane was detected to evaluate the inhibitory effect of the antibody on cell migration. Results: IMC-2C5 significantly inhibited PDGF-B-induced directed migration of PDGFRβ-positive tumor cells.[1]
In vivo	Methods: To investigate the antitumor activity of IMC-2C5, female athymic nude mice were selected and subcutaneously inoculated with human tumor cell lines to establish xenograft models of OVCAR-8, NCI-H460, OVCAR-5, and Caki-1. After successful tumor establishment, IMC-2C5 was administered via intraperitoneal injection (60 mg/kg twice weekly or 40 mg/kg three times weekly), with a total weekly dose of 120 mg/kg. Tumor volume and mouse body weight were measured twice weekly. Results: IMC-2C5 monotherapy was well tolerated, with no significant weight loss or behavioral abnormalities; IMC-2C5 exhibited significant antitumor activity in both the OVCAR-8 and NCI-H460 models, but showed no significant antitumor effect in the OVCAR-5 and Caki-1 models. [1]

In vivo	Methods: To investigate the effect of IMC-2C5 on the expression of pro-angiogenic factors in tumor tissue, an NCI-H460 xenograft nude mouse model was established. IMC-2C5 was administered intraperitoneally at 40 mg/kg three times weekly. Mice were euthanized 3, 7, and 14 days after dosing, and tumor tissue was harvested for homogenization. Results: IMC-2C5 increased PDGF-B levels in tumor tissue.[1]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.0069 mL	0.0345 mL	0.0689 mL
5 mM	0.0014 mL	0.0069 mL	0.0138 mL
10 mM	0.0007 mL	0.0034 mL	0.0069 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.