Brontictuzumab

Cat. No.:	HY-P99258
CAS No.:	1447814-75-6
Target:	Notch
Pathway:	Neuronal Signaling; Stem Cell/Wnt
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description

Brontictuzumab (OMP 52M51) is a monoclonal antibody (MAb) that inhibits Notch1 signal. Brontictuzumab selectively binds the negative regulatory region of the Notch1. Brontictuzumab inhibits tumor cell proliferation. Brontictuzumab can be used in the research of leukemia and lymphoma[1][2][3].

In Vitro

Brontictuzumab (0-100 μg/mL) inhibits Notch1 signaling, including DLL4, JAG1/2 activity[1].
Brontictuzumab (25 μg/mL, 4 days) reduces the levels of Notch1 intracellular domain in the HPB-ALL cell line[1].
Brontictuzumab (25 μg/mL, 48 h) inhibits DLL4-mediated cleaved-Notch1 overexpression in MCL cells[2].
Brontictuzumab (25 μg/mL, 48 h) blocks the increased phosphorylation of both, MEK and ERK by DLL4 stimulation in Mino cells[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[2]

Cell Line:	DLL4 (4 μg/mL)-stimulated MCL cells
Concentration:	25 μg/mL
Incubation Time:	24 or 48 h
Result:	Inhibited DLL4-dependent activation of Notch1.

In Vivo

Brontictuzumab (15 mg/kg, i.p.) reduces tumor burden in T-ALL xenograft[3].
Brontictuzumab (20 mg/kg, i.p., every 4 days) inhibits DLL4 induced activation of Notch1 in MCL model[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	T-ALL xenograft[3]
Dosage:	15 mg/kg
Administration:	Intraperitoneal injection (i.p.), twice weekly.
Result:	Inhibited tumor growth and reduced the size of the spleen. Showed massive infiltration and replacement of normal hematopoiesis by leukemia cells.

Animal Model:	NSG mice injected with DLL4-stimulated NOTCH1-mutated mino cells ex vivo[2]
Dosage:	20 mg/kg
Administration:	Intraperitoneal injection (i.p.)
Result:	Inhibited cleaved Notch1 but was not enough to cause a significant efficacy in tumor growth.

REFERENCES

[1]. Ferrarotto R, et al. A phase I dose-escalation and dose-expansion study of brontictuzumab in subjects with selected solid tumors. Ann Oncol. 2018 Jul 1;29(7):1561-1568.

[2]. Silkenstedt E, et al. Notch1 signaling in NOTCH1-mutated mantle cell lymphoma depends on Delta-Like ligand 4 and is a potential target for specific antibody therapy. J Exp Clin Cancer Res. 2019 Nov 1;38(1):446.

[3]. Agnusdei V, et al. Therapeutic antibody targeting of Notch1 in T-acute lymphoblastic leukemia xenografts. Leukemia. 2014 Feb;28(2):278-88.

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