

Carotuximab

Cat. No.:	HY-P99494
CAS No.:	1268714-50-6
Target:	TGF-beta/Smad
Pathway:	Stem Cell/Wnt; TGF-beta/Smad
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Carotuximab (TRC105) is a IgG1 monoclonal antibody that blocks endoglin (CD105) and its downstream Smad signaling pathway. Carotuximab has immunomodulatory and antineoplastic actions ^{[1][2]} .	
In Vitro	Carotuximab (TRC105; 300 µg/mL; pretreatment 1 h, and then co-cultured for 12 h) reduces the 7-Ketocholesterol-induced endoglin (Eng) protein levels and pSmad1/5 and pSmad2/3 signaling in human aortic endothelial cells (HAoECs). Carotuximab mediated blockage of Eng prevented 7-Ketocholesterol-induced adhesion and transmigration of monocytes through endothelial monolayers ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Western Blot Analysis ^[1]	
	Cell Line:	Human aortic endothelial cells (HAoECs)
	Concentration:	300 µg/mL
	Incubation Time:	Pretreatment 1 h, and then co-cultured for 12 h
	Result:	Reduced the 7-Ketocholesterol-induced Eng protein levels and pSmad1/5 and pSmad2/3 signaling.
In Vivo	Carotuximab (TRC105; 2 mg/kg; i.v; every 3 days; for 8 weeks) along with Decitabine results in a more durable anti-leukemic effect in acute myeloid leukemia (AML) xenografts. And also enhances reactive oxygen species (ROS) activity ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Female NSG (NOD.Cg-Prkdc ^{scid} Il2rgtm1Wjl/SzJ; 7-8 weeks) injected with primary AML-0032 cells ^[2]
	Dosage:	2 mg/kg
	Administration:	i.v; every 3 days; for 8 weeks
	Result:	Along with Decitabine resulted in a more durable anti-leukemic effect in AML xenografts.

REFERENCES

- [1]. Katarina Tripska , et al. Monoclonal anti-endoglin antibody TRC105 (carotuximab) prevents hypercholesterolemia and hyperglycemia-induced endothelial dysfunction in human aortic endothelial cells. *Front Med (Lausanne)*. 2022 Sep 7;9:845918.
- [2]. June Baik, et al. Therapeutic effect of TRC105 and decitabine combination in AML xenografts. *Heliyon*. 2020 Oct 13;6(10):e05242.
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Caution: Product has not been fully validated for medical applications. For research use only.

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