Gemtuzumab ozogamicin

Cat. No.: HY-109539

CAS No.: 220578-59-6

Target: Antibody-Drug Conjugates (ADCs); Apoptosis

Pathway: Antibody-drug Conjugate/ADC Related; Apoptosis

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)

Gemtuzumab ozogamicin

BIOLOGICAL ACTIVITY

Description

Gemtuzumab ozogamicin is an antibody-drug conjugate (ADC) consisting of a humanized immunoglobulin (IgG4) antibody directed against CD33 that is conjugated to the cytotoxic drug Calicheamicin (HY-19609). Calicheamicin is a cytotoxic antibiotic. Gemtuzumab ozogamicin can be used for the research of acute myeloid leukemia (AML)[1][2].

In Vitro

Gemtuzumab ozogamicin (1-250 ng/mL ; 72 hours) has cell cytotoxicity in CD33-positive cells[1].
Gemtuzumab ozogamicin is an ADC. After binding of the antibody to CD33 and subsequent internalization, Calicheamicin mediates cytotoxicity to CD33-positive myeloid cells primarily through induction of DNA damage and subsequent apoptosis [1].

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

Cell Viability Assay[1]

Cell Line:	CD33-positive and CD33-deficient cells (HL60, HL60R, Kasumi-1, MV4-11, MV4-11R, primary CD34-positive HSPCs and primary AML blasts)
Concentration:	0, 1, 5, 10, 25, 50, 100, 250 ng/mL
Incubation Time:	72 hours
Result:	Wildtype HL60 exhibited the highest sensitivity to GO (IC_{50}=1.37 ng/mL), and almost all HL60 cells died at 5 ng/mL concentration. HL60R, Kasumi-1, MV4-11 and MV4-11R showed similar sensitivity, with IC_{50}s of 2.28, 3.19, 3.63 and 5.36 ng/mL, respectively. IC_{50} in CD33-negative HL60R, Kasumi-1, MV4-11 and MV4-11R cells also increased significantly to 95.53, 50.78, 72.74 and 66.8 ng/mL, respectively.

REFERENCES

[1]. Yi Liu, et al. CD33-directed immunotherapy with third-generation chimeric antigen receptor T cells and gemtuzumab ozogamicin in intact and CD33-edited acute myeloid leukemia and hematopoietic stem and progenitor cells. Int J Cancer. 2022 Apr 1;150(7):1141-1155.

[2]. Baron J, et al. Gemtuzumab ozogamicin for the treatment of acute myeloid leukemia. Expert Rev Clin Pharmacol. 2018;11(6):549-559.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA