KY-1044

Cat. No.:	HY-P99431
CAS No.:	2489390-15-8
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description

KY-1044 (Alomfilimab; SAR 445256) is a fully human IgG1 antibody targeting inducible costimulatory receptor (ICOS). KY-1044 depletes $ICOS^{high}$ cells via antibody-dependent cellular cytotoxicity (ADCC) through the engagement of FcgRIIIa. KY-1044 act as a costimulatory molecule on cells expressing lower ICOS levels, such as $CD8^+$ T_{Eff} cells (through FcgR-dependent clustering). KY-1044 exploit the differential expression of ICOS on T-cell subtypes to improve the intratumoral immune contexture and restore an antitumor immune response[1].

In Vitro

KY-1044 (Alomfilimab; SAR 445256; 0-100ng/mL; 4 hours) causes human natural killer (NK) cells expressing hICOS (5:1 effector:target cell ratio) to induce potent ADCC-mediated killing (EC_{50}=5.6 pmol/L)[1].
KY-1044 significantly induces the luciferase signal (EC_{50} of 0.15 nmol/L). A similar EC_{50} is obtained against mouse ICOS (0.53 nmol/L), rat ICOS (0.48 nmol/L), or cynomolgus monkey ICOS (0.22 nmol/L)[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

KY-1044 (Alomfilimab; SAR 445256; 10 mg/kg; ip; twice a week for 3 weeks) mIgG2a (effector enable) monotherapy blocks tumor growth in lymphoma/myeloma tumor models[1].
In syngeneic mouse tumor models, KY-1044 depletes $ICOS^{high}$ Treg and increases the intratumoral T_{Eff}:Treg ratio, resulting in increased secretion of IFNγ and TNFα by T_{Eff} cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	8- to 10-week-old wild-type female Balb/C or C57BL/6J mice with A20 cells[1]
Dosage:	200 μg (10 mg/kg)
Administration:	IP; twice a week for 3 weeks starting from 6 days following tumor cell implantation
Result:	Triggered an antitumor response, with more than 90% of the mice being free from measurable disease at the end of the study (day 42).

REFERENCES

[1]. Richard C.A. Sainson, et al. An Antibody Targeting ICOS Increases Intratumoral Cytotoxic to Regulatory T-cell Ratio and Induces Tumor Regression. Cancer Immunol Res. 2020 Dec;8(12):1568-1582.

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