Data Sheet (Cat.No.T9908)

TargetMol

Pembrolizumab

Chemical Properties

CAS No. : 1374853-91-4

Formula:

Molecular Weight:

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

Biological Description

Description	Pembrolizumab (MK-3475) is a highly selective humanized monoclonal antibody that antagonizes PD-1. It can block the PD-1 protein on T cells and prevent their interaction with PD-L1 on cancer cells.
Targets(IC50)	PD-1/PD-L1
In vitro	**METHODS**: Peripheral blood mononuclear cells (PBMC) from healthy donors (HD) and primary breast cancer (PBC) were cultured for 24 hours (with plate-bound anti-CD3 and anti-CD28 antibodies for activated cells) and treated with 2 μg/ul Pembrolizumab (MK-3475) treatment (for treated cells) stains intracellular expression of CD4, PD-1 surface marker, and CTLA-4. **RESULTS** In CD4 T cells, PD-1 expression was significantly higher in PBC patients compared with steady-state HD. Pembrolizumab treatment significantly reduced PD-1 expression in CD4 T cells in both cohorts of non-activated and activated PBMC. [3] **METHODS**: After HCCLM3 and SK-HEP.1 cells were lysed, 10 ng/mL TNF-α and 10 ng/mL IL-1β were added to the medium of DC and incubated for 48 hours. Finally, DCs were co-cultured with CIK cells at a ratio of 1:10 for 2 days, and on day 12, pembrolizumab 20 ug/mL was added to DC-CIK cells to mediate PD-1 blockade. **RESULTS** pembrolizumab treatment increased DC-CIK cell proliferation, indicating that pembrolizumab enhanced DC-CIK cell cytotoxicity against HCC cell lines.[4]
In vivo	**METHODS**: In the open-label, international, multicenter extension cohort of the phase 1 KEYNOTE-001 trial, patients with advanced melanoma who progressed after 2 or more doses of ipilimumab were randomly assigned to receive 2 mg/kg every 3 weeks or Treatment with Pembrolizumab (MK-3475)10 mg/kg. **RESULTS** Among the 173 patients treated (2 mg/kg, N = 89; 10 mg/kg, N = 84), the ORR was nearly identical at 26% for both doses, 73% and 68%, respectively. of patients showed reduction in target lesion size. [1] **METHODS**: Patients were randomly assigned to intravenous pembrolizumab 200 mg every 3 weeks for ≤35 cycles of pembrolizumab or until disease progression, unacceptable toxicity, or discontinuation. Imaging was performed at week 9, then every 6 weeks until year 1, and every 9 weeks thereafter. **RESULTS** The median OS of pembrolizumab was 14.9 months (95% CI, 11.5-20.6), and it could improve OS in the PD-L1 CPS ≥ 20 and CPS ≥ populations, and the DOR was also significantly longer. [2]

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