ABSTRACT

COMBINED CHIMERIC ANTIGEN RECEPTOR TARGETING CD19 AND CD20 AND APPLICATIONS THEREOF

The present invention provides a combined chimeric antigen receptor targeting CD19 and CD20 and application thereof. Specifically, the present invention provides a combined chimeric antigen receptor targeting CD19 and CD20, which comprises a scFv targeting CD19 and a scFv targeting CD20, a hinge region, a transmembrane region, and an intracellular signaling domain. The present invention provides a nucleic acid molecule encoding the chimeric antigen receptor and a corresponding expression vector, a CAR-T cell, and applications thereof. The experimental results show that the chimeric antigen receptor provided by the present invention shows extremely high killing ability against tumor cells. The chimeric antigen receptor of the present invention targets CD19 and/or CD20 positive cells and can be used to treat CD19 and/or CD20 positive B-cell lymphoma, leukemia and other diseases.

(FIG. 1)