

NUCLEIC ACID MOLECULE COMPRISING INTRACELLULAR SIGNALING DOMAIN  
AND NKp30 TRANSMEMBRANE DOMAIN AND CHIMERIC ANTIGEN RECEPTOR  
COMPRISING THE SAME

**ABSTRACT**

5        Provided is an isolated nucleic acid molecule comprising an intracellular signaling domain  
and a NKp30 transmembrane domain, and a chimeric antigen receptor comprising the same. The  
isolated nucleic acid molecule comprising a nucleic acid sequences of (a) an extracellular antigen  
binding domain; (b) a hinge domain; (c) a NKp30 transmembrane domain; (d) a NKp30  
cytoplasmic domain; and (e) an intracellular signaling domain. By introducing nucleic acid  
10 sequences of the intracellular signaling domain, the NKp30 transmembrane domain and the  
NKp30 cytoplasmic domain into a T cell, the resulting CAR-T cell is a multi-chain CAR-T cell  
with a NKp30 receptor complex, which forms stable immune synapses with cancer cells and  
exhibits excellent cytotoxicity against cancer cells.