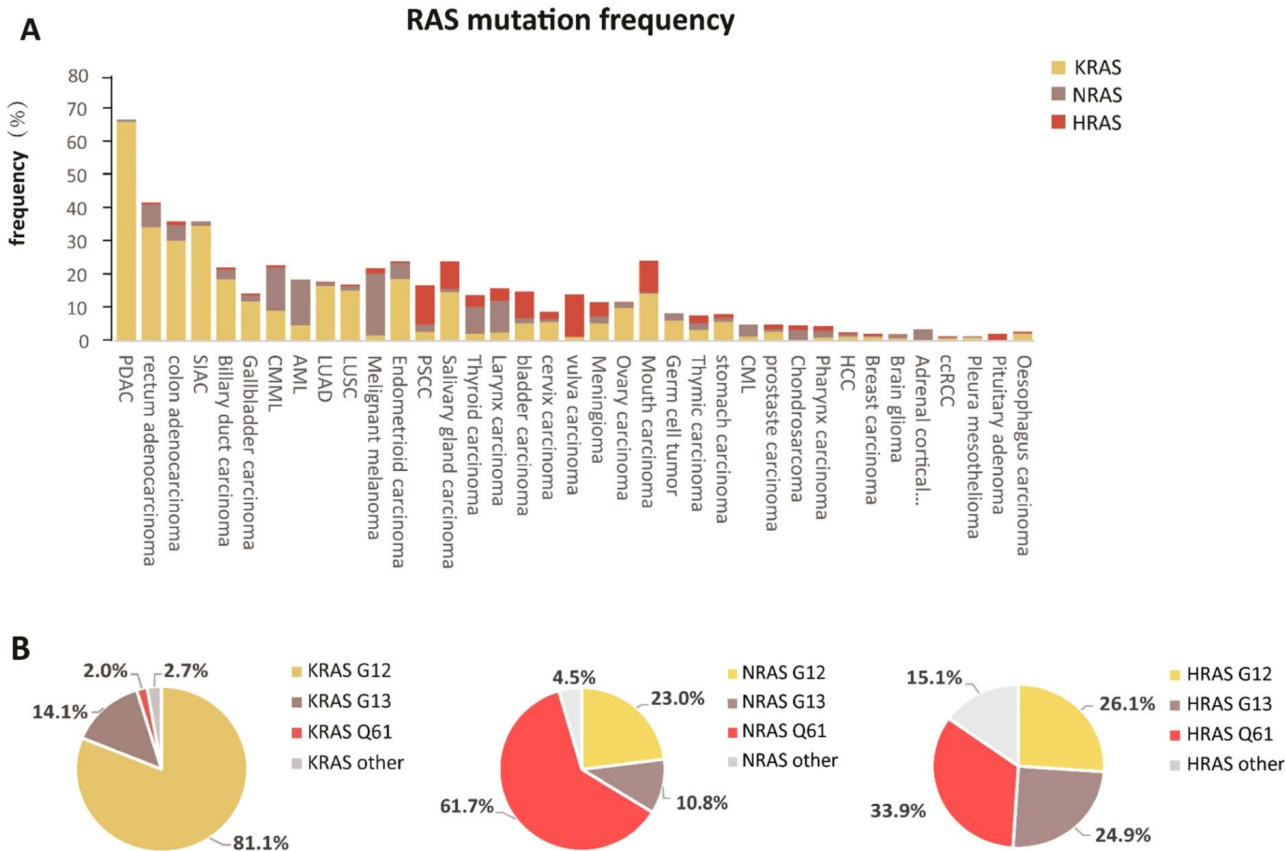


Development of CAR-T cells specifically targeting a KRAS G12V neoantigen/HLA-A*02:01 complex

医学系研究科 生命医科学専攻
個別化がん免疫治療学

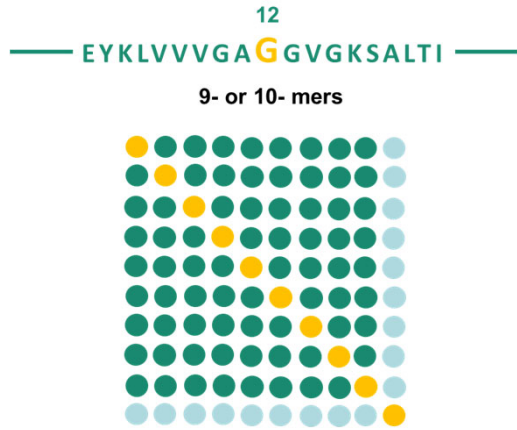
Liu Meiou

Background



- RAS mutations have a high frequency in numerous types of human cancer.
- RAS mutations play a significant role in the tumor progression.
- Because of the lack of pockets for drug binding on the surface of RAS proteins, it is challenging to target them with conventional molecular drugs.

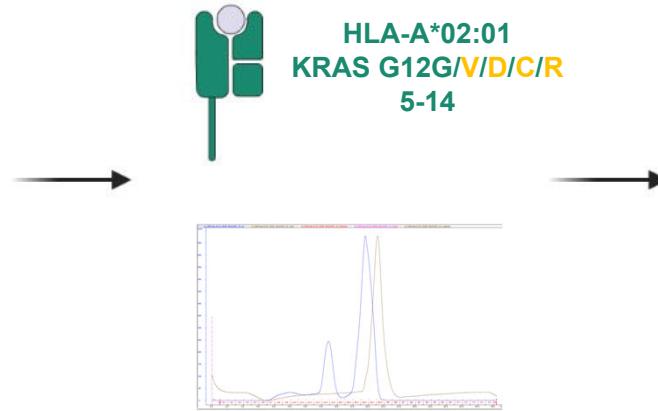
The scheme of this study



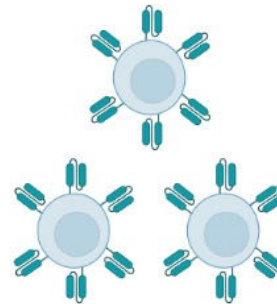
Predicted KRAS G12 codon affinity



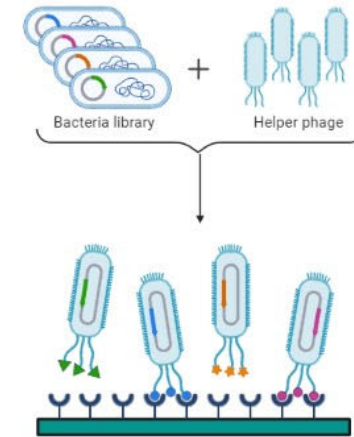
Functional assays



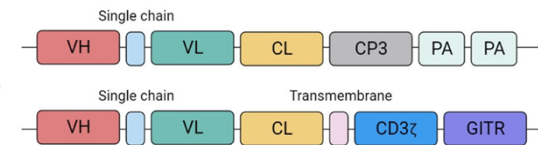
Construction of the pMHC complex



HLA-A*02:01 KRAS G12V
#24 CAR T cells

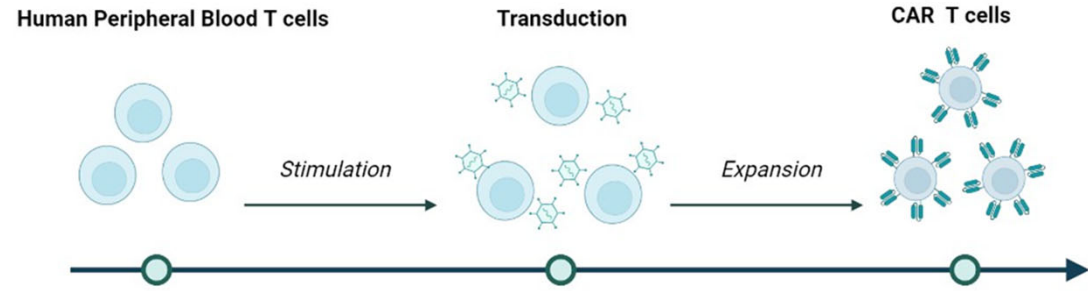
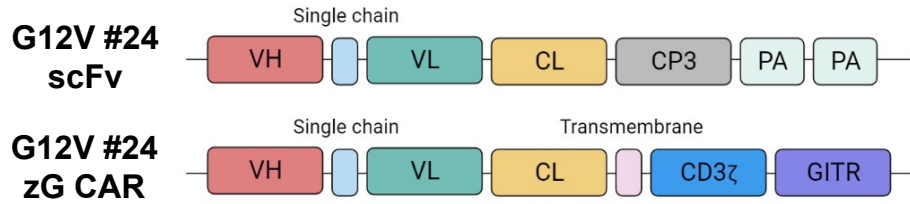


Screening of antibody from Phage Library

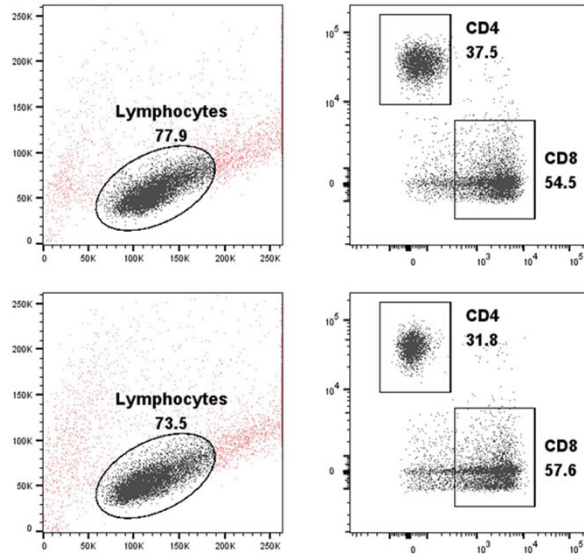


Preparation of CAR
construct

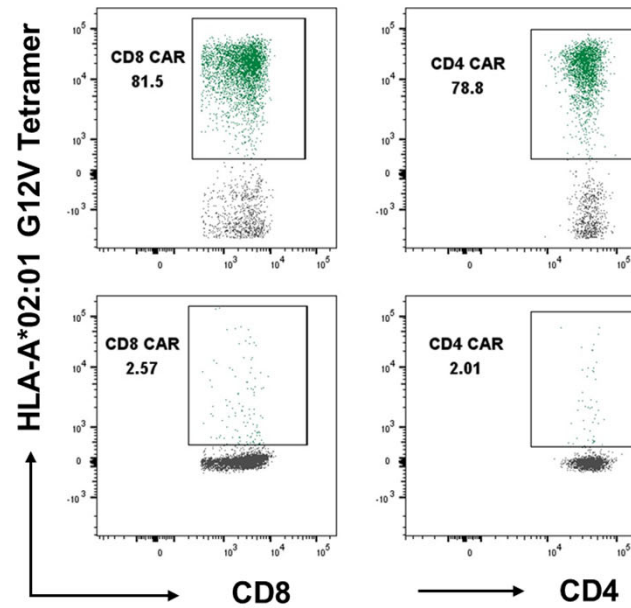
Transduction of HLA-A*02:01 KRAS G12V #24 in Human Peripheral Blood T cells



**HLA-A*02:01
KRAS G12V #24
zG CAR**



NGMC



Thank you