

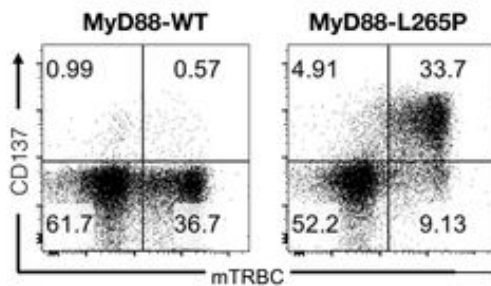
Technology Offer

T-cell therapy of MYD88L265P-dependent B-cell lymphoma

Reference Number 32-00059

Challenge

Diffuse large B-cell lymphomas (DLBCL) exhibit high degree of genetic heterogeneity. MyD88^{L265P} is a prominent genetic aberration responsible for fostering tumor growth in this heterogenous lymphoma entity. In particular 17% of DLBCL and 42% in PCNSL patients carry the oncogenic mutation. The resulting aberrant scaffold protein would theoretically provide a suitable target for therapeutic intervention but is almost not addressable by conventional pharmacological means.



Technology

Novel human TCRs for targeting the mutant epitope of MyD88^{L265P} have been developed for an adoptive TCR cell therapy approach in HLA-B7 positive patients. This cell-therapy approach offers a novel therapeutic option for patients with relapsed and/or refractory DLBCL and primary CNS lymphoma in a personalized fashion (stratification by presence of somatic mutation). TCR redirected T-cells are able to selectively recognize and kill only those target cells presenting the MyD88^{L265P} mutant epitope in an HLA-B7 restricted manner. This technology provides an opportunity for a straightforward development path towards clinical application in a defined patient population.

Epitope dependent activation of TCR-engineered T-cells.

Commercial Opportunity

This opportunity is available for in-licensing or preclinical (co-) development towards First-in-Human.

Development Status

Extensive analysis regarding specificity, reactivity, cytotoxicity and safety for various TCRs has been carried out in vitro in multiple Non-Hodgkin lymphoma cell.

Patent Situation

European Patent Application (January 2019)

Further Reading

Cinar, Ö., et al., «MyD88L265P mutation specific TCR gene therapy for treatment of B-cell lymphoma», in preparation
Weber, A.N.R., et al., «Oncogenic MYD88 mutations in lymphoma: novel insights and therapeutic possibilities». Cancer Immunol Immunother. 2018 Nov;67(11):1797-1807