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# Efficacy evaluation of optimized CAR-T therapy against refractory epithelial ovarian cancer

**CellenGene**

CellenGene
Cell and Gene therapy

**ONCOLOGY** | **Candidate**

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| Product Type | CAR-T cells |
| Indication | Refractory epithelial ovarian cancer |
| Target | Mesothelin (MSLN) |
| MoA(Mechanism of Action) | Chimeric antigen receptor (CAR) on CAR-T binds to mesothelin (MSLN) on cancer cells. The binding of CAR to MSLN then triggers the activation signals (through 41BB and CD3z domain of CAR) into CAR-T cells and allows the cytotoxic effect of CAR-T to elimnate cancer cells |
| Competitiveness | MSLN is the most targeted antigen and attractive target for CAR-T therapy against solid tumors. MSLN, a cell surface glycoprotein, is highly expressed in multiple solid tumors including ovarian cancer, whereas it is expressed at low levels in normal mesothelial tissues. However, all MSLN CAR-T being developed based on SS1-scFv harboring antigen binding moiety to membrane-distal epitope of MSLN have failed in clinical trials due to limited efficacy. Here, we developed a new version of scFv which has binding affinity to Region II domain (middle) of MSLN. MSLN CAR-T based on the new version of scFv showed anti-tumor activity higher than that of SS1-based CAR-T and further optimization led to the version of efficacy with complete remission in MSLN-positive tumor xenograft mice. |
| Development Stage | Candidate |
| Route of Administration | Parenteral-intravenous |

kddf_bd@kddf.org
KDDF Business Development Team

KDDF
Korea Drug Development Fund