

Development of First-in-Class NK Cell Engagers Targeting Trop-2/NKp46 Incorporating ADCC Maximizing Fc Variants for the Treatment of Triple-Negative Breast Cancer

Korea University

Disease Area	Cancer
Product Type	NK cell engager
Indication	Triple-negative breast cancer (TNBC)
Target	Trop-2, NKp46 and CD16A
Mechanism of Action	Maximized NK cell activation → Efficient clearance of Trop-2 expressed TNBC
Competitiveness	First-in-Class - Trop-2 target NK cell engager. - Maximized NK cell recruitment through CD16A×NKp46×B7-H6. - Bispecific antibody format that can be produced by simple bioprocessing steps.
Development Stage	Hit to lead
Route of Administration	Intravenous
Key Data	<div style="background-color: #f0f0f0; padding: 10px;"> <p style="color: #c00000; margin: 0;">Maximization of NK cell cytotoxicity</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> <p style="background-color: #fff; border-radius: 10px; padding: 5px; margin-bottom: 5px;">① Fc variants that show world-best ADCC activity</p> <p style="background-color: #fff; border-radius: 10px; padding: 5px; margin-bottom: 5px;">② NKp46-targeting antibody</p> <p style="background-color: #fff; border-radius: 10px; padding: 5px; margin-bottom: 5px;">③ Improved NKp30 binding B7-H6 variants</p> <p style="text-align: center; color: #c00000; font-size: 2em; margin: 10px 0;">↓</p> <p style="background-color: #ffe6e6; border-radius: 20px; padding: 10px; text-align: center; margin: 0;">Completed identification of first-in-class leading NK cell engager for triple-negative breast cancer treatment</p> </div> <div style="width: 50%; text-align: center;"> </div> </div> </div>

IP	<ul style="list-style-type: none"> [CD16A binding Fc] Patent No. 10-2021-0124554 / 10-2021-0124555 / 10-2021-0124556 / 10-2022-0113489 / PCT-KR2022-013476 / PCT-KR2022-013481 [NKp46 binding antibody] Patent No. 10-2024-0025467 [B7-H6 variants] Patent No. 10-2023-0077426 / PCT-KR2023-008393
-----------	---