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Development of a Lead ADC Targeting LRRC15 for the Cancer Cells and Cancer-associated Fibroblasts

EdisBiotech. Co., Ltd.

ONCOLOGY | **Lead**

Product Type	Antibody
Indication	Osteosarcoma, Melanoma, Colon cancer, Pancreatic cancer, Breast cancer
Target	LRRC15
MoA(Mechanism of Action)	• The LRRC15 ADC binds specifically to LRRC15 on the surface of target cells. After the ADC bind and internalized, the cytotoxic payload is released, leading to direct cell death of LRRC15-positive cancer cells. • Due to the cell-permeable nature of the payload, this results in a "bystander effect," killing adjacent LRRC15-negative cancer cells and suppressing tumor growth.
Competitiveness	• LRRC15 ADCs induce tumor cell death either directly (when LRRC15 is on cancer cells) or indirectly via the bystander effect (when LRRC15 is on CAFs), supporting their development as broad-spectrum and metastatic cancer therapeutics. • The developed ADC demonstrated superior *in vivo* efficacy compared to competitor antibodies by utilizing an antibody with enhanced internalization capability and a topo 1 payload that inhibits drug resistance pumps. This combination resulted in potent antitumor activity in animal models, highlighting the therapeutic potential of this LRRC15-targeted ADC for overcoming resistance mechanisms and improving cancer treatment outcomes.
Development Stage	Lead
Route of Administration	IV (intravenous)