

# Development of Self-Assembling Peptide-Based PROTAC Nanodrug for Overcoming Drug Resistance to EGFR Inhibitors

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ONCOLOGY	Hit
Product Type	Targeted Protein Degradation
Indication	<b>EGFR-overexpressing tumors:</b> metastatic colon cancer (mCRC), non-small cell lung cancer (NSCLC), head and neck squamous cell carcinoma (HNSCC) <b>EGFR inhibitor-resistant cancers</b>
Target	Epidermal Growth Factor Receptor (EGFR)
MoA(Mechanism of Action)	The self-assembled peptide-based PROTAC nanodrug forms stable nanoparticles in aqueous environments and selectively accumulates in tumor tissues via the enhanced permeation and retention (EPR) effect. Upon binding to overexpressed EGFR on the cancer cell surface, the nanodrug is internalized and induces complete degradation of EGFR through both lysosome- and proteasome-mediated pathways. This dual-pathway degradation effectively circumvents drug resistance and mitigates adverse effects associated with current EGFR inhibitors.
Competitiveness	<b>Tyrosine kinase inhibitors (TKIs)</b> for EGFR-targeted therapy <b>Antibody therapeutics</b> for EGFR-targeted therapy (e.g., Erbitux)
Development Stage	Hit
Route of Administration	Intravenous injection (IV), administered every three days at a dose of 10 mg/kg in murine models.

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