

Identification of Preclinical Small Molecule Candidate which induces STING protein expression by inhibiting TRIM29-mediated STING Ubiquitination

SPARKBIO PHARMA



ONCOLOGY	Candidate
Product Type	Small Molecule
Indication	Solid Tumor
Target	STING (stimulator of interferon genes)
MoA(Mechanism of Action)	<div style="text-align: center; background-color: #eee; padding: 5px; border: 1px solid #ccc;"> STING expression/activation, immune response, and T-cell activation in colon cancer inhibit cancer disease progression </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="border: 1px solid #ccc; padding: 5px; background-color: #fff;">Rapid STING degradation</div> <div style="font-size: 20px;">→</div> <div style="border: 1px solid #ccc; padding: 5px; background-color: #fff;">Impaired innate immune response</div> <div style="font-size: 20px;">→</div> <div style="border: 1px solid #ccc; padding: 5px; background-color: #fff;">Reduced APC recruitment into the tumor tissue</div> <div style="font-size: 20px;">→</div> <div style="border: 1px solid #ccc; padding: 5px; background-color: #fff;">Reduced T cell immune response</div> <div style="font-size: 20px;">→</div> <div style="border: 1px solid #ccc; padding: 5px; background-color: #fff;">Cancer Progression</div> </div> <div style="margin-top: 20px;"> <p>TRIM29</p> <ol style="list-style-type: none"> (1) Immuno regulatory role in immune cells, that limits STING activity (2) One of major cause of STING downregulation in cancer (3) But, direct TRIM29 elimination promotes metastasis </div> <ul style="list-style-type: none"> • In vitro <ul style="list-style-type: none"> ✓ High Throughput Screening (HTS) system ✓ STING-TRIM29 protein interaction model ✓ STING expression, T-cell activation, MDSC suppression • In vivo <ul style="list-style-type: none"> ✓ Colon syngeneic mouse model ✓ Combination therapy model with ICI ✓ Cancer indication expansion model <div style="text-align: right; font-size: 10px; margin-top: 10px;"> ✓: Confirmed ✓: Planned </div>
Competitiveness	First in Class
Development Stage	Candidate
Route of Administration	Intra-tumoral