

# Derivation of new modality 'Next Generation TPD' leading materials targeting new target SOX2

EPD Biotherapeutics Inc.

<b>Disease Area</b>	<b>Cancers</b>
<b>Product Type</b>	Gene therapy (mRNA)
<b>Indication</b>	Lung cancers (Squamous Cell Lung Carcinoma, Squamous Cell Lung Carcinoma)
<b>Target</b>	SOX2 (Sex-determining region Y-box 2)
<b>Mechanism of Action</b>	Targeted SOX2 degradation via UPS
<b>Competitiveness</b>	<p>1) Pre-existing protein degradation: In the case of siRNA, it is not possible to affect the existing SOX2 proteins already expressed before drug administration. However, EPD's EPDeg™ platform is expected to show faster and more effective treatment efficacy because it can degrade the existing SOX2 proteins immediately after drug administration.</p> <p>2) Undruggable target degradation: EPDeg™ platform is possible to degrade even most of the undruggable target proteins such as a transcription factors that can not be bonded with small molecule based PROTACs.</p>
<b>Development Stage</b>	<b>Hit</b>
<b>Route of Administration</b>	I.V.
<b>Key Data</b>	<p>1) Discovering three types of nanobodies that bind to target protein SOX2 and not to similar target SOX1 and SOX3 (about 1 to 2 nM KD)</p> <p>2) All three next-generation TPDs showed the SOX2 protein degradation as pM levels of DC50 and the cancer cell growth inhibition as pM levels of GI50 in multiple cancer cell lines.</p> <p>3) Confirming the superior and rapid efficacy of our next-generation TPDs compared to SOX2 siRNA by treatment of our next-generation TPDs and SOX2 siRNA into cancer cell lines at the same concentration and measure SOX2 protein level changes and cancer cell growth inhibition</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p><b>A549</b> SOX2 protein level</p> </div> <div style="text-align: center;"> <p><b>A549</b> Cell growth</p> </div> </div> <p>4) Confirmation of the possibility of improving the therapeutic efficacy when administered in combination with standard therapeutic agents</p> <p>5) EPD's next-generation TPDs shows powerful tumor growth inhibition in the A549 xenograft model via intravenous injection.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p><b>A549</b></p> </div> <div style="text-align: center;"> <p><b>A549</b></p> </div> </div>