



DBPR117: A Precision Medicine (mAb) Targeting RSPO3/Wnt-Mediated Tumorigenesis

INDICATIONS:

RSPO3-dependent cancers with unmet medical needs

- ✓ Colorectal cancer (CRC)
- ✓ Lung cancer
- ✓ Pancreatic cancer
- ✓ TNBC

PATENTS:

TWI702050, US11623951, ZL201880079067.5, JP7370997 etc.

DEVELOPMENT STATUS:

Drug Candidate

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INVENTION DESCRIPTION

R-spondin 3 (RSPO3) was identified as a novel key modulator of cancer development and a potential target for treatment of cancers. Therefore, we selected RSPO3 as a therapeutic target and discovered a potent neutralizing antibody, DBPR117, that was shown to have anti-cancer activity. DBPR117 is a humanized IgG1 that is capable of neutralizing the aberration of RSPO3-mediated Wnt/ β -catenin signaling. DBPR117 is comparable with rosmantuzumab (131R010), an antibody developed by OncoMed, as shown in a number of assays including binding assays, *in vitro* ligand neutralization and wound healing assays, and *in vivo* PDX (patient-derived xenograft) or CDX (cell line-derived xenograft) models.

COMPETITIVE ADVANTAGES

Several lines of evidence supported that anti-RSPO3 antibody would be effective in treating cancers with RSPO3 dysregulation.

- RSPO3 knockdown in basal-like mouse mammary tumor cells were shown to reduce Wnt signaling, epithelial-to-mesenchymal transition-like features, migration capacity, and tumor formation *in vivo*.
- DBPR117, alone or in combination with other drugs, were shown to be effective in cancers with RSPO3 overexpression or cancers harboring RSPO3-fusion gene.
- DBPR117 is capable of binding to the human RSPO3 at pM affinity with novel amino acid sequences in the complementary determining regions (CDRs).

MARKET POSITIONING/OPPORTUNITY

- DBPR117 can inhibit cancer stemness and DBPR117 will be examined for activity in reducing RSPO3-mediated tumorigenesis and metastasis.
- DBPR117 will be developed to cover a wide range of cancers along with companion diagnostics that can identify patients who are most likely to benefit from DBPR117, alone or in combination with other agents.