

# Development of hit/lead antibody neutralizing TMPRSS4, a novel therapeutic target for the treatment of non-small cell lung cancer

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ONCOLOGY	Hit
Product Type	Monoclonal antibody (IgG1)
Indication	Non-small cell lung cancer (NSCLC)
Target	Transmembrane protease serine 4 (TMPRSS4)
MoA(Mechanism of Action)	TMPRSS4 expression is upregulated in NSCLC through DNA hypomethylation. High expression of TMPRSS4 protein correlates with poor prognosis of NSCLC. TMPRSS4 exhibits pro-tumorigenic and pro-metastatic activity; TMPRSS4 facilitates EMT and CSC-like properties, which confer chemotherapy resistance. TMPRSS4 cleaves pro-uPA directly to yield active uPA, thereby acting as an upstream regulator of the uPA/uPAR system. Blockade of TMPRSS4 suppresses tumor growth and metastasis and increases sensitivity to chemotherapeutics.
Competitiveness	First-in-Class
Development Stage	Hit
Route of Administration	intravenous