Product Data Sheet

Product Name: INCA033989
Cat. No.: GC79472

Chemical Properties

Cas. No.			
Formula		M.Wt	143.9
Solubility		Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Background

INCA033989 is a fully human IgG1 monoclonal antibody targeting mutCALR (K D = 1.75 nM for mutCALR del52; K D = 6.78 nM for mutCALR ins5). INCA033989 antagonizes mutCALR-driven

signaling and proliferation. INCA033989 selectively inhibits pSTAT3/pSTAT5. INCA033989 prevents thrombocytosis and reduces the expansion of mutCALR-positive cells. INCA033989 is useful for research on myeloproliferative neoplasms [1].

In Vivo, INCA033989 (10 mg/kg; i.p.; single dose) reduces Ba/F3-TPOR/CALRdel52 cell burden in NOD scid gamma (NSG) mice model of Myeloproliferative neoplasm (with a plasma concentration of 50 μg/mL)[1]. INCA033989 (3-10 mg/kg; i.p.; twice weekly; 10 weeks) prevents thrombocytosis, reduces mutCALR-positive cell expansion, and normalizes bone marrow histology in C57BL/6 (CD45.2+; lethally irradiated recipients), CD45.2+ floxed homozygous CALRdel52 KI, CD45.2+ wt transgenic (UBI-GFP/BL6) mice model of Myeloproliferative neoplasm [1].

In Vitro, INCA033989 binds to recombinant mutCALRdel52 and mutCALRins5 proteins with nanomolar affinities (KD = 1.75 nM for mutCALRdel52; 6.78 nM for mutCALRins5), showing slight preferential binding to mutCALRdel52[1]. INCA033989 (72 h) selectively inhibits cytokine-independent proliferation of Ba/F3-TPOR/CALRdel52 and UT-7-TPOR/CALRdel52 cells (IC_{50} = 0.1 μg/mL; IC90 = 1 μg/mL)[1]. INCA033989 (4 h) broadly inhibits mutCALR-driven oncogenic signaling (including pSTAT5) in Ba/F3-TPOR/CALRdel52 cells[1]. INCA033989 (4 h) does not induce complement-dependent cytotoxicity in TF-1-TPOR/CALRdel52 cells[1].

References:
[1]. Reis ES, et al. Selective targeting of mutated calreticulin by the monoclonal antibody INCA033989 inhibits oncogenic function of MPN. Blood. 2024;144(22):2336-2348.