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Research Models and Services
Oncology - Mutant Mice

Burkitt Lymphoma PDX model (PNX0255)

Xenograft Tumor Sheet

MODEL	NOMENCLATURE	HAIR	T CELLS	B CELLS	NK CELLS
R2G2®	B6;129-*Rag2*^{tm1Fwa}*Il2rg*^{tm1Rsky}/DwlHsd	Yes	No	No	No

MODEL CHARACTERISTICS

The R2G2 model is a double knockout mouse with an ultra immunodeficient phenotype. The model was created by backcrossing the *IL2RG* (common gamma chain) mutation on to a mixed background mouse (C57BL/6 and 129 mix) with a mutation in Rag2.

The recombination activating gene 2 (Rag2) interruption causes a deficiency in T and B cells. The common gamma chain gene *(IL2RG)* interruption results in a lack of functional receptors for IL-2, IL-4, IL-7, IL-9 and IL-15.

Envigo acquired from Fox Chase Cancer Center in 2016, where the model had been maintained since 2005. The model is a white-bellied, light chinchilla (light tan). Envigo was acquired by Inotiv in 2021.

PATIENT-DERIVED XENOGRAFT (PDX) MODEL

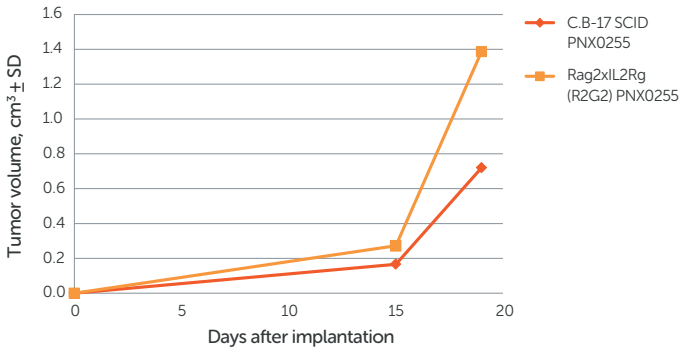
Animals were implanted subcutaneously in both flanks using 200 ul of 1:1 mixture of matrigel and minced tumor fragments resected from F1 generation of PNX0255 mice.

TUMOR GROWTH *IN VIVO*

The take rate and tumor growth of F2 generation of Burkitt Lymphoma PDX model PNX0255 was compared in two C.B-17 SCID and two Rag2xIL2Rg double knockout (R2G2) 5-8 weeks old mice.

The mice were maintained under controlled environmental conditions in the Laboratory Animal Facility at Fox Chase Cancer Center. The animals received 18% Protein Teklad Rodent Diet produced by Inotiv, *ad libitum*. Diet consumption was controlled visually on a daily basis and sterilized drinking water was continuously available *ad libitum* via drinking bottles. Body weights were taken and tumor measurements were assessed with a caliper twice per week.

Growth of PNX0255 Burkitt Lymphoma PDX Xenografts (F2) into R2G2 and SCID mice



Data shown as mean values; N=2 per group

Tumor growth study was performed by Dr. Vladimir Khazak from NexusPharma, Inc., Philadelphia, PA.