



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 <sup>tm1Fwa</sup> IL2rg <sup>tm1Rsky</sup> /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).

### 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.

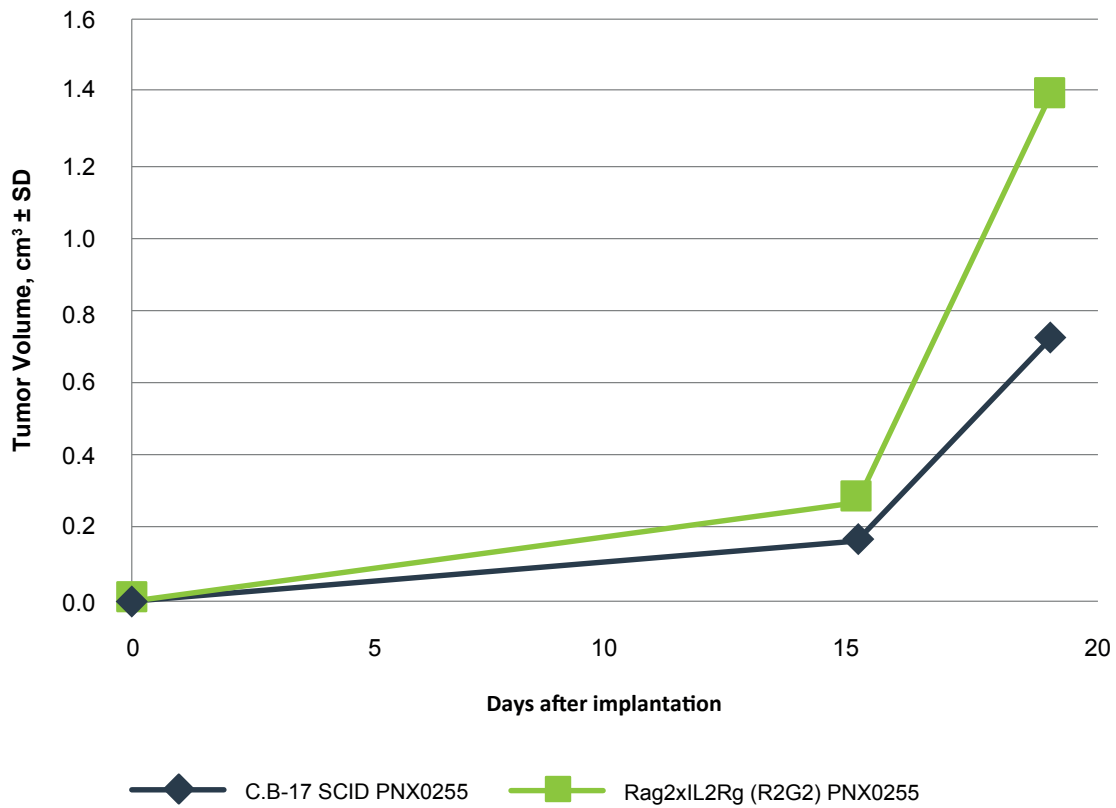
### Tumor growth *in vivo*

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 Envigo, *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.

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