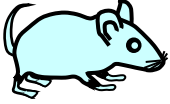
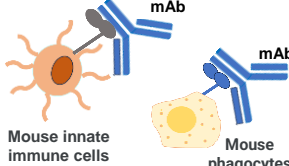
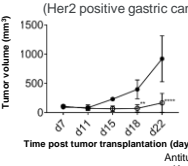

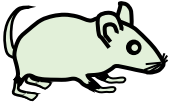
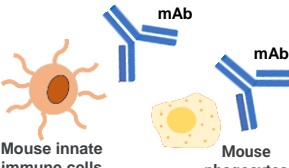
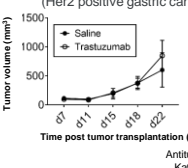



For antibody-based drug research


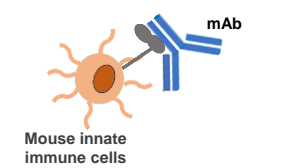
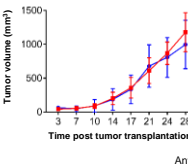

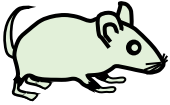
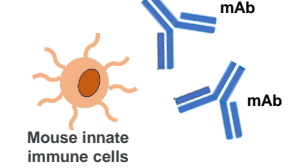
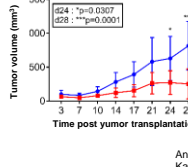

FcResolv™ NOG

Severe immunodeficient mouse with mouse FcγR knocked out
Attenuates false positive and false negative results
caused by mouse innate immune cells

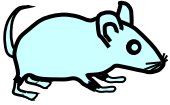
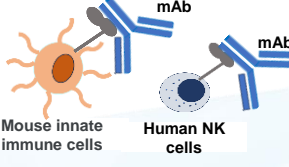
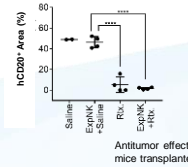

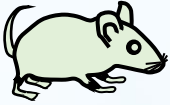
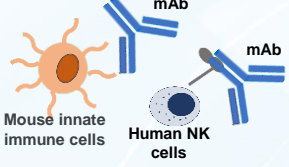
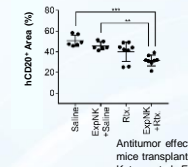

Attenuates false positive and false negative results caused by mouse innate immune cells

<p>CIEA NOG</p>  <p>Mouse FcγR is normal</p>	 <p>Mouse innate immune cells Mouse phagocytes</p>	<p>4-1ST cell line (Her2 positive gastric cancer cell line)</p>  <p>Tumor volume (mm³)</p> <p>Time post tumor transplantation (days)</p> <p>Antitumor effect by trastuzumab Katano et al. <i>Scientific reports</i></p>	 <p>False-positive tumor regression by antibody-dependent mechanism via mouse FcγR on mouse immune cells.</p>
<p>FcResolv NOG</p>  <p>Removed mouse FcγR</p>	 <p>Mouse innate immune cells Mouse phagocytes</p>	<p>4-1ST cell line (Her2 positive gastric cancer cell line)</p>  <p>Tumor volume (mm³)</p> <p>Time post tumor transplantation (days)</p> <p>Antitumor effect by trastuzumab Katano et al. <i>Scientific reports</i></p>	 <p>By using FcResolv NOG mice, false positives mediated by mouse FcγR can be avoided.</p>

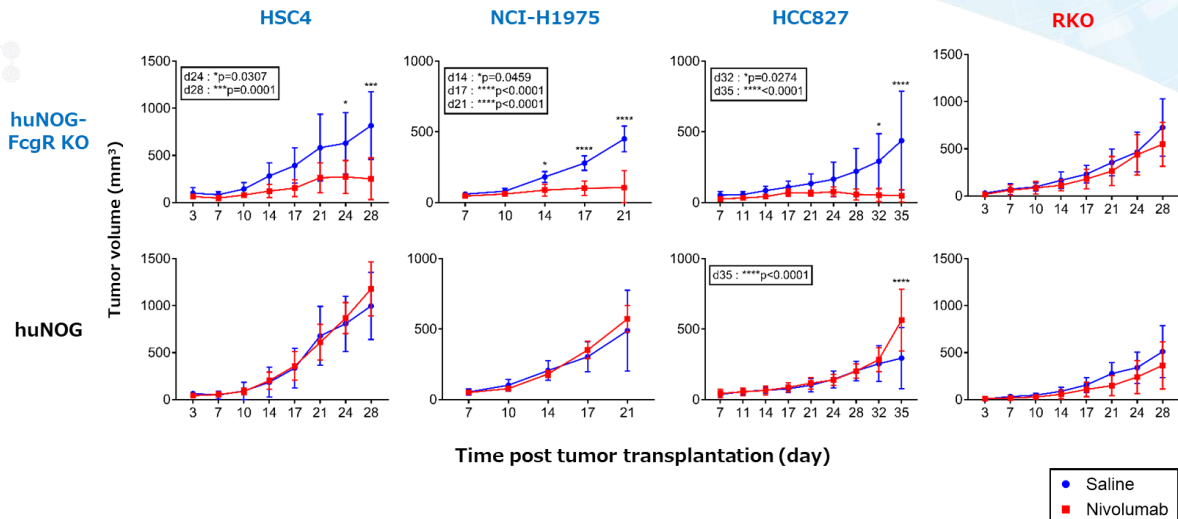
Reduces false negatives caused by interactions between mouse FcγRs and therapeutic Fc domains

<p>CIEA NOG</p>  <p>Mouse FcγR is normal</p>	 <p>Mouse innate immune cells</p>	<p>HSC4</p>  <p>Tumor volume (mm³)</p> <p>Time post tumor transplantation (days)</p> <p>Antitumor effect by Nivolumab Katano et al. <i>Scientific reports</i></p>	 <p>False negative efficacy results due to interference with mouse FcγR.</p>
<p>FcResolv NOG</p>  <p>Removed mouse FcγR</p>	 <p>Mouse innate immune cells</p>	<p>HSC4</p>  <p>Tumor volume (mm³)</p> <p>Time post tumor transplantation (days)</p> <p>Antitumor effect by Nivolumab Katano et al. <i>Scientific reports</i></p>	 <p>Using FcResolv NOG mice eliminates misleading false negatives.</p>

Specifically detects human NK cell-mediated ADCC

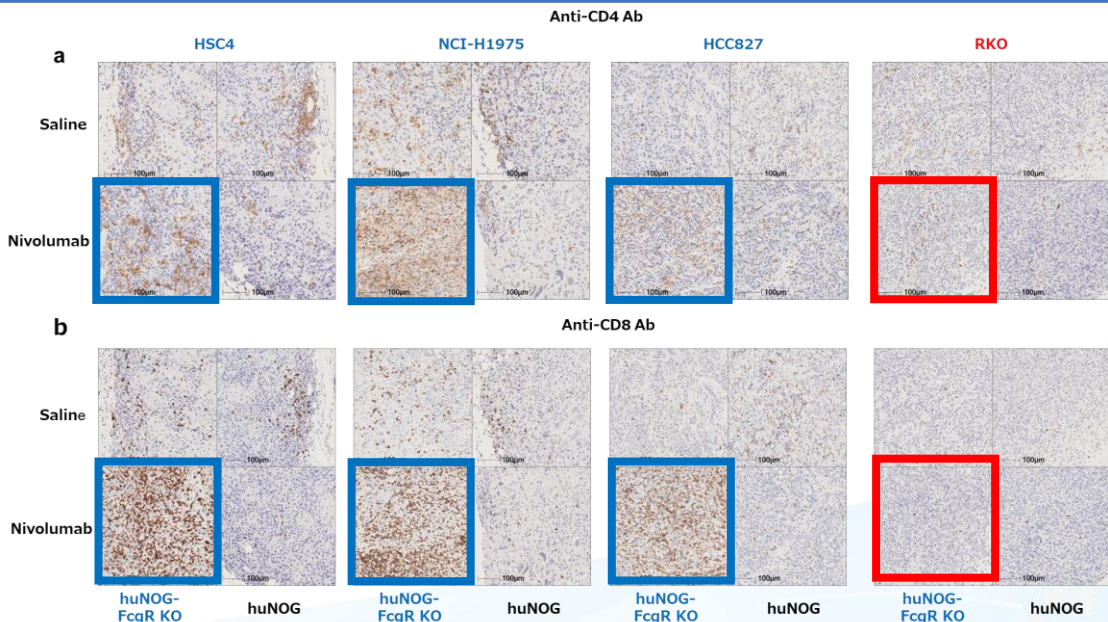
<p>NOG-IL15</p>  <p>Mouse FcγR is normal</p>	 <p>Mouse innate immune cells Human NK cells</p>	<p>NOG-IL15</p>  <p>IC50% Area (%)</p> <p>Antitumor effect by NK cells + rituximab in mice transplanted of Daudi cells. Katano et al. <i>Frontiers in Immunology</i></p>	 <p>It is not possible to determine whether the observed efficacy is mediated by human cells or mouse cells.</p>
<p>FcResolv NOG-IL15</p>  <p>Removed mouse FcγR</p>	 <p>Mouse innate immune cells Human NK cells</p>	<p>FcResolv NOG-IL15</p>  <p>IC50% Area (%)</p> <p>Antitumor effect by NK cells + rituximab in mice transplanted of Daudi cells. Katano et al. <i>Frontiers in Immunology</i></p>	 <p>FcResolv can specifically detect human NK cell-mediated ADCC activity in NOG-IL15 mice.</p>

Useful for studying antitumor effects of immune checkpoint blocking antibodies FcγR deficient



Tumor growth inhibition by nivolumab:

Growth of HSC4, HCC827, and NCI-H1975 tumors was strongly suppressed or rejected by Nivolumab in huNOG-FcγR KO mice, but not in conventional huNOG mice.



Pathological analysis by immunohistochemistry (IHC) :

- HSC4, NCI-H1975, and HCC827 tumors transplanted into nivolumab-treated huNOG-FcγR KO mice showed enhanced human CD4+ and CD8+ T cell infiltration, but not RKO.
- In conventional huNOG mice, only a small number of human T cell infiltrates were observed after nivolumab administration.

Katano et al. *Scientific reports* 2021

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