

# Pik3ca RBD mutant Mouse

**Catalogue number:** 151553

**Sub-type:** Mouse

**Images:**

## Contributor

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**Images:**

## Tool details

**\*FOR RESEARCH USE ONLY**

**Name:** Pik3ca RBD mutant Mouse

**Alternate name:**

**Class:**

**Conjugate:**

**Description:** In vivo study of p110alpha disruption and Ras signalling;

**Purpose:**

**Parental cell:**

**Organism:**

**Tissue:**

**Model:** Mutant

**Gender:**

**Isotype:**

**Reactivity:**

**Selectivity:**

**Host:**

**Immunogen:**

**Immunogen UNIPROT ID:**

**Sequence:**

**Growth properties:**

**Production details:** A Pi3kca targeting vector, containing substitutions at residues 208 (T to D) and 227 (K to A) and a loxP flanked resistance cassette, was transfected into 129 ES cells. Properly targeted ES cells containing a homologous recombination event were selected, cloned and injected into C57BL6 blastocysts. Chimeric offspring were backcrossed to establish heterozygous mice, which were subsequently mated to Cre transgenic mice to excise the resistance cassette. Heterozygous Pik3ca mice were interbred to establish homozygous mutants.

**Formulation:**

**Recommended controls:**

**Bacterial resistance:**

**Selectable markers:**

**Additional notes:** The Pi3kca mouse is an ideal tool for studying cell signalling and the development of Ras or PI-3K inhibitors. Pi3kca mice express a mutated knockin form of PI-3kinase alpha (one of the main effectors of Ras signalling) which is no longer able to associate with Ras. This knockin mutation greatly increases the tumour resistance of Pi3kca mice to chemically- and K-Ras-induced tumourigenesis. In addition, the mice could be used to study the role of Ras-PI-3K signalling in inflammation, cytoskeletal reorganisation and cell motility. Pi3kca mice demonstrate deficient development and branching of the lymphatic system compared to wildtype mice. Full mouse strain name B6.129S7(Cg)-Pik3catm1Jdo/J

## Target details

**Target:** Phosphoinositide 3-Kinase C alpha (PI 3kinase) / p110alpha mutant (disrupted Ras interaction)

**Target alternate names:**

**Target background:**

**Molecular weight:**

**Ic50:**

## Applications

**Application:**

**Application notes:**

## Handling

**Format:**

**Concentration:**

**Passage number:**

**Growth medium:**

**Temperature:**

**Atmosphere:**

**Volume:**

**Storage medium:**

**Storage buffer:**

**Storage conditions:**

**Shipping conditions:** Embryo/Spermatozoa- Dry Ice

## Related tools

**Related tools:**

## References

**References:** Henderson et al. 2001. J Exp Med. 194(2):219-26. PMID: 11457896. ; The use of lymphocyte function-associated antigen (LFA)-1-deficient mice to determine the role of LFA-1, Mac-1, and alpha4 integrin in the inflammatory response of neutrophils. ; Berlin-Rufenach et al. 1999. J Exp Med. 189(9):1467-78. PMID: 10224287. ; Lymphocyte migration in lymphocyte function-associated antigen (LFA)-1-deficient mice.

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