TET2 Conditional Knockout Transgenic Mice

Conditionally-inducible mouse model for studying hematopoietic stem cell self-renewal and myeloid transformation. (B6;129S-Tet2tm1.1Iaai/J; Jax stock number: 017573)

The B6;129S-Tet2tm1.1Iaai/J transgenic mouse, assigned Jax stock number 017573, is a conditionally-inducible tet2 knockout model for studying hematopoietic stem cell self-renewal and myeloid transformation. TET2 (tet methylcytosine dioxygenase 2) is one of the most frequently mutated genes in hematopoietic malignancies, such as myelodysplastic syndrome (MDS) and acute myeloid leukemia (AML). As a member of the ten-eleven-translocation (TET) protein family, TET2 is α-ketoglutarate- and Fe2+-dependent dioxygenase (α-KGDDs) that oxidizes 5-methylcytosines (5mCs) to 5-hydroxymethylcytosine (5hmC) and promotes locus-specific reversal of DNA methylation. Truncations or mutations in the TET2 catalytic domain, which negatively affect co-factor binding, lead to impaired 5mC oxidation and consequent DNA hypermethylation. Mutations in TET2 are associated with an increased risk of MDS progression and poor prognosis in AML.

Note: Shipping costs and logistics will be managed by JAX upon order approval.

References

1. Moran-Crusio K, Reavie L, Shih A, et al.(2011) , https://pubmed.ncbi.nlm.nih.gov/21723200/, Cancer Cell

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