Human K-ras G12D Model | CLATS

Human K-ras G12D Transgenic Goat

Human mutated K-ras (hK-rasG12D) was knocked in goat endogenous K-ras locus through homologous recombination.

Backgrounds

Human mutated K-ras (hK-rasG12D) was chosen as the transgene, as it is present in 20% of cancers. Both hK-rasG12D and the herpes simplex viral thymidine kinase (HSV1-tk) reporter genes, flanked by a pair of LoxP sites, were knocked in goat fetal fibroblast (GFF) endogenous K-ras locus through homologous recombination. The transgenic fibroblasts were used for the production of transgenic goats by somatic cell nuclear transfer (SCNT). The transgenic goats with inducible expression of oncogenic human K-ras could be promising models for studying the mechanism of K-ras related bioprocesses and for screening and testing potential drugs related to K- ras.

Figure 1

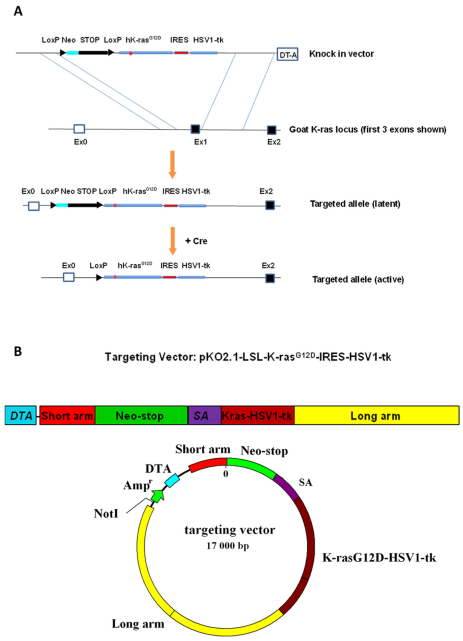

Figure 1. Schematic representation of the conditional hK-RasG12D construct. A. Targeting strategy of knock-in of the hK-rasG12D to goat K-ras exon 1 locus and its activation by Cre; B. Schematic outline of the cloning strategy for the construction of targeting vector.

CONTACTS