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Suppressing Ku70/Ku80 expression elevates homology-directed repair efficiency in primary fibroblasts

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Abstract

The main DNA repair pathways, nonhomologous end joining (NHEJ) and homology-directed repair (HDR), are complementary to each other; hence, interruptions of the NHEJ pathway can favor HDR. Improving HDR efficiency in animal primary fibroblasts can facilitate the generation of gene knock-in animals with agricultural and biomedical values by somatic cell nuclear transfer.