

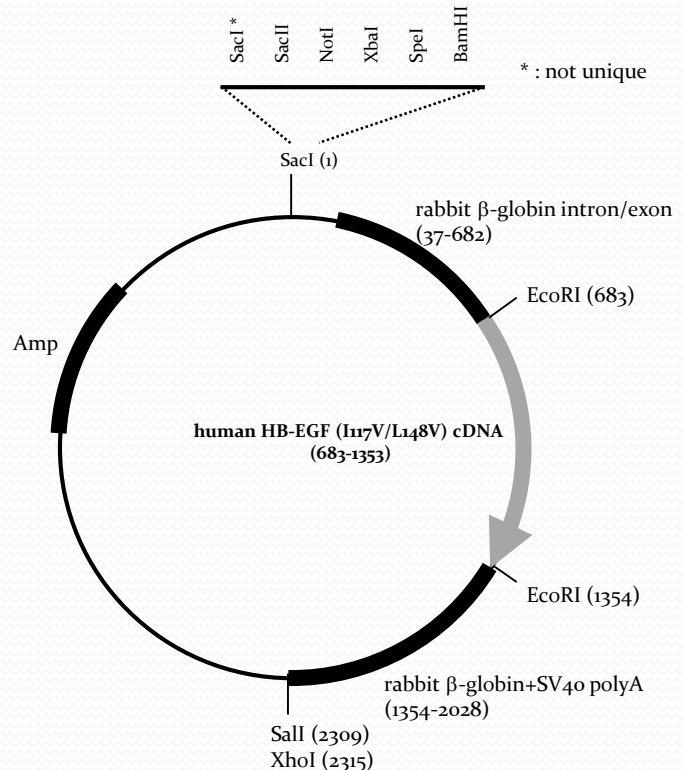
# Mutant human Diphtheria Toxin Receptor cDNA TRECK system\*

**TRECK system\*:** TRECK (toxin receptor-mediated cell knockout) system is the method to generate novel model mice which utilizes the difference of toxin sensitivity between species. This system developed by Prof. Dr Kenji Kohno in Nara Institute of Science and Technology.

In this system, transgenic or knock-in mice, which express human diphtheria toxin receptor (DTR) under specific promoter of your choice, is constructed. Then the administration of diphtheria toxin (DT) to the mice causes death of specific type of cells which expresses the receptor gene.

The plasmid we provide contains human HB-EGF cDNA with mutations (I117L/L148V) which repress growth factor activities as HB-EGF. This plasmid can be used to construct expression vector for TRECK system.

## Plasmid information



### References:

Diphtheria toxin receptor mediated conditional and targeted cell ablation in transgenic mice.  
M.Saito *et al.*, Nat. Biotech.nol. 2001 Aug;19(8):746-50.

A diphtheria toxin receptor deficient in epidermal growth factor like biological activity.  
N Furukawa *et al.*, J Biochem. 2001 Dec;140(6):831-41.

Generation of mouse models for type 1 diabetes by selective depletion of pancreatic beta cells using toxin receptor- mediated cell knockout.  
K.Matsuoka *et al.*, Biochem. Biophys. Res. Commun., 2013 Jul 5;436(3):400-5.

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