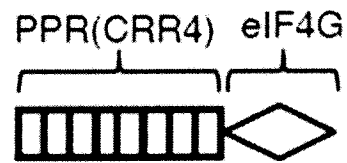
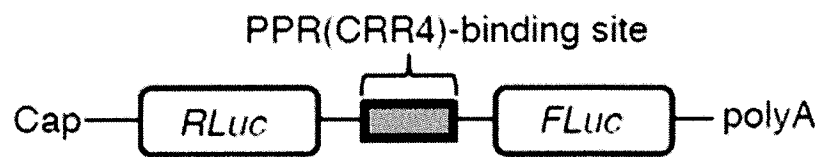


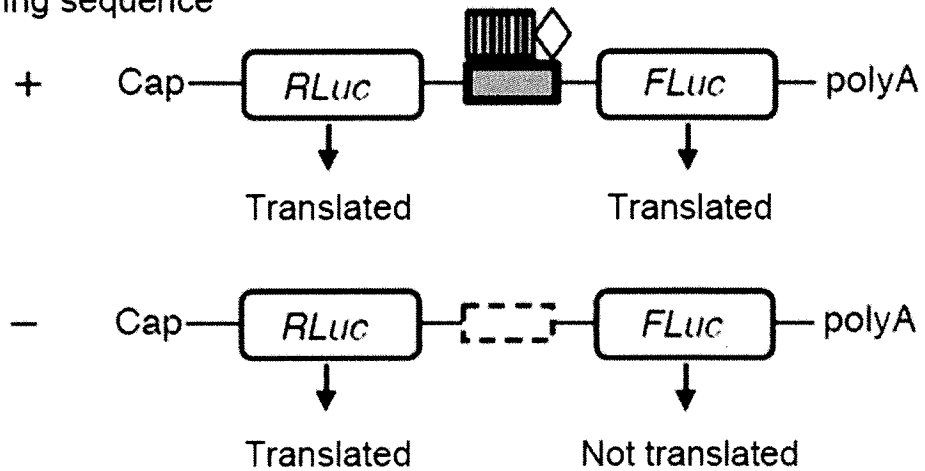
[Figure 1]

**A** Effector plasmid

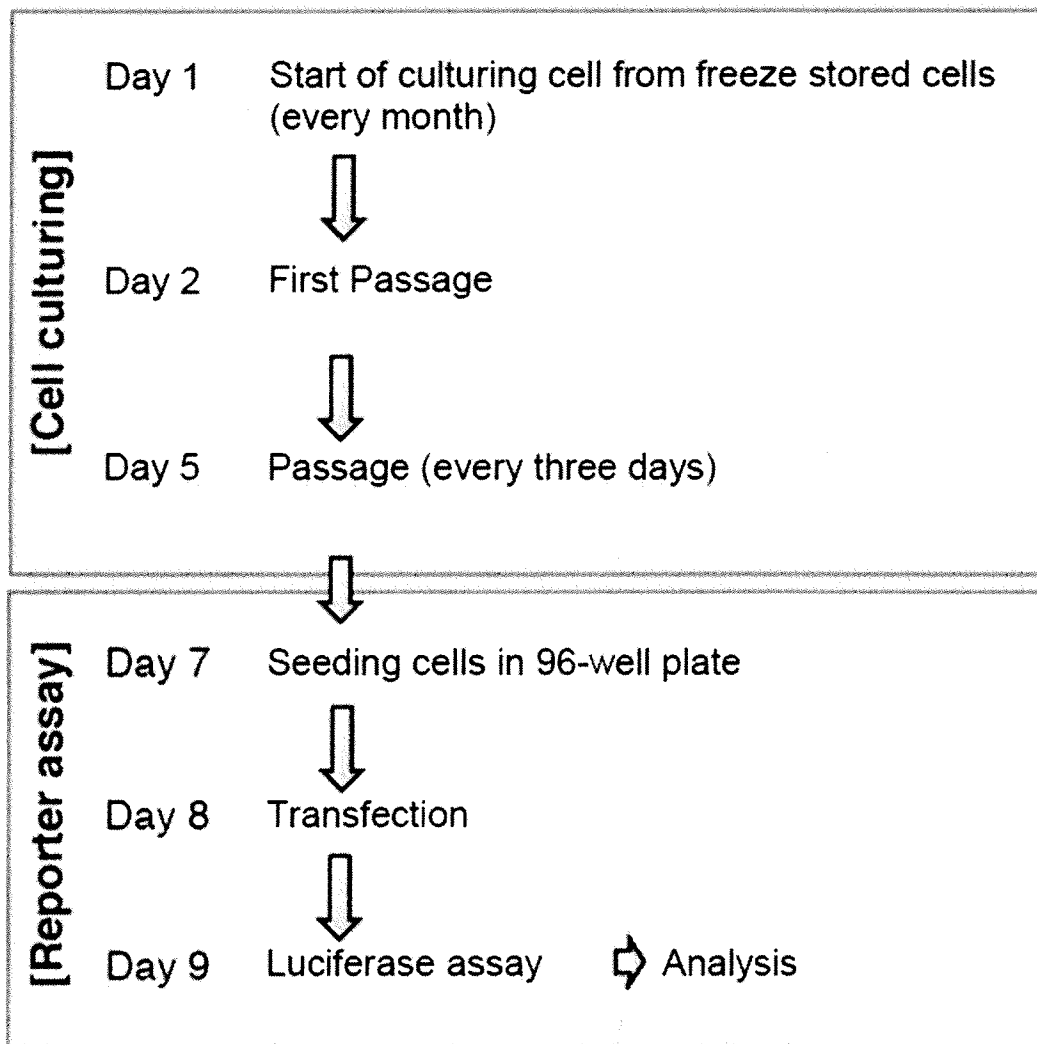
## Reporter plasmid

**B**

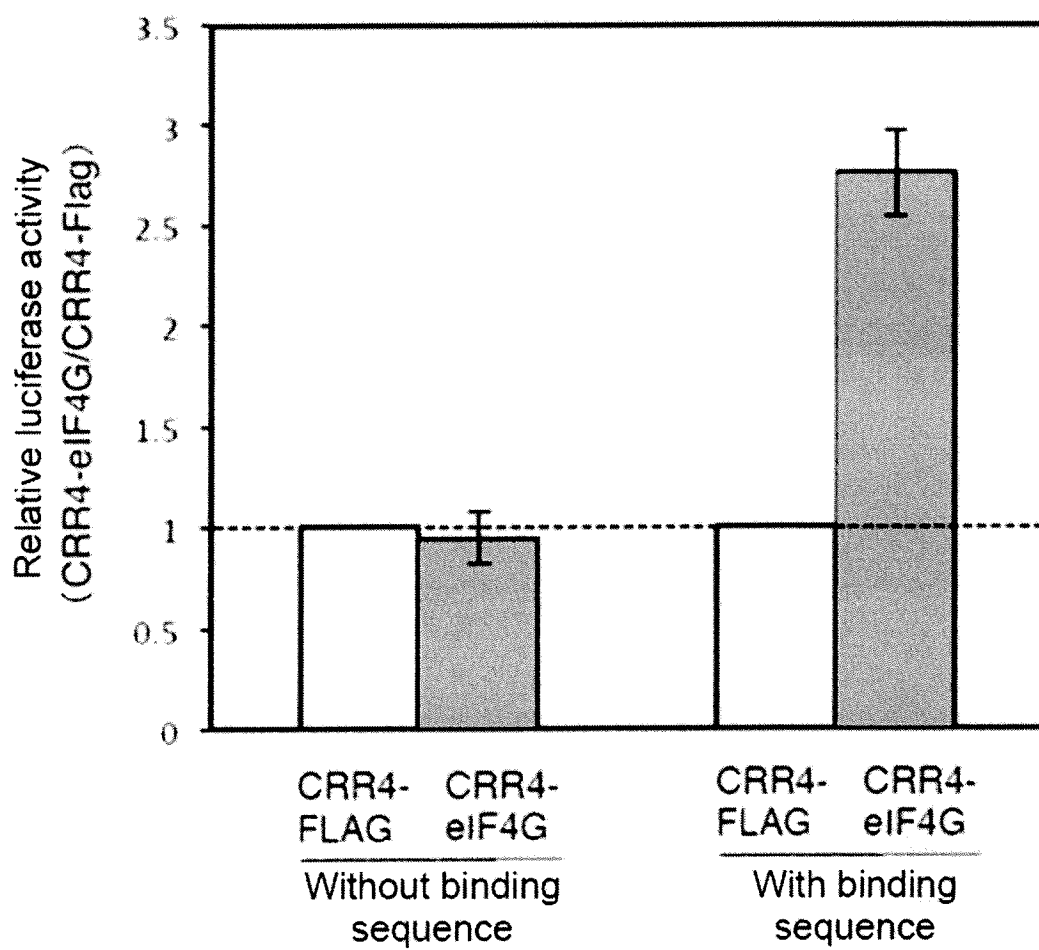
## Binding sequence



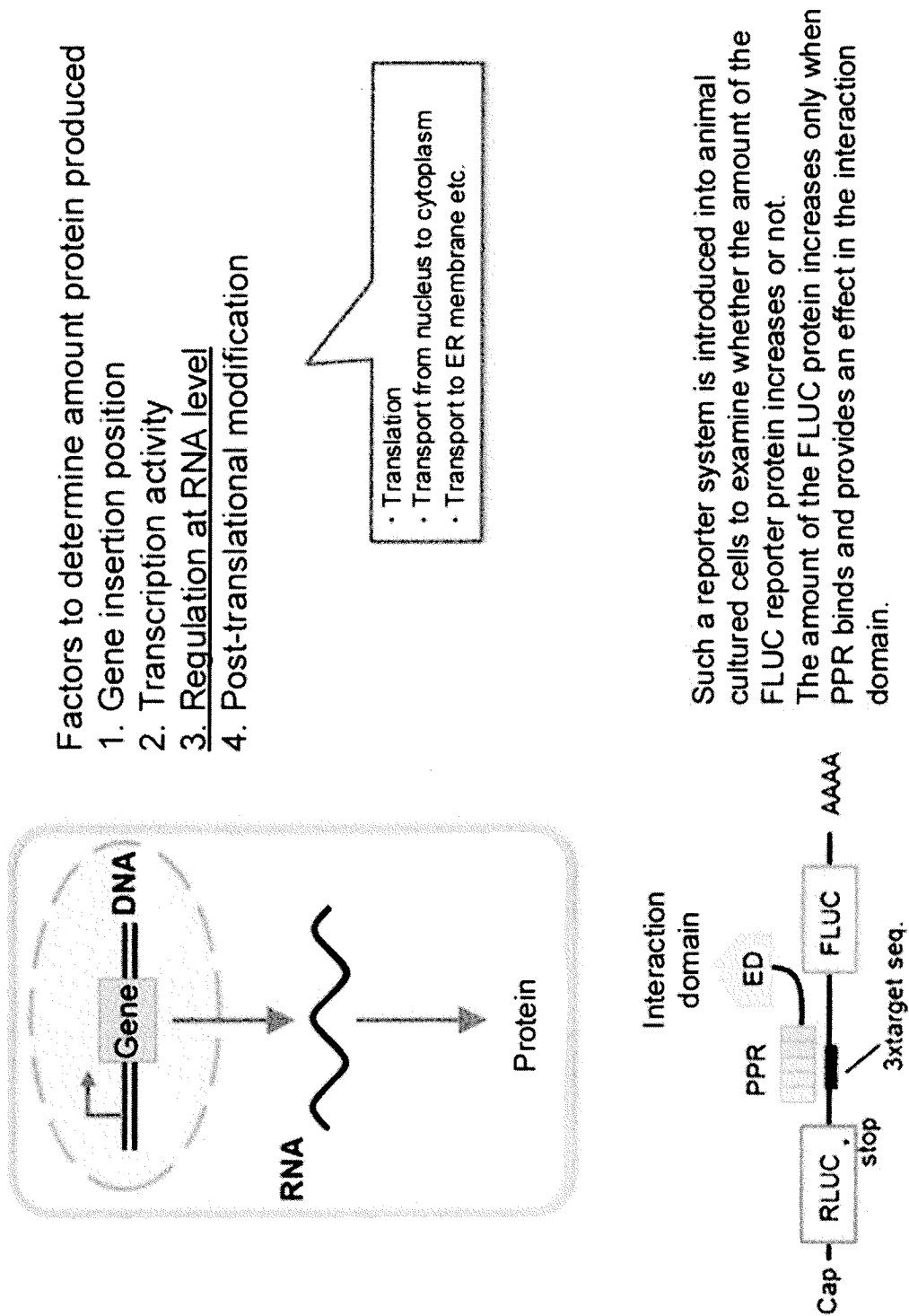
[Figure 2]



[Figure 3]



[Figure 4]

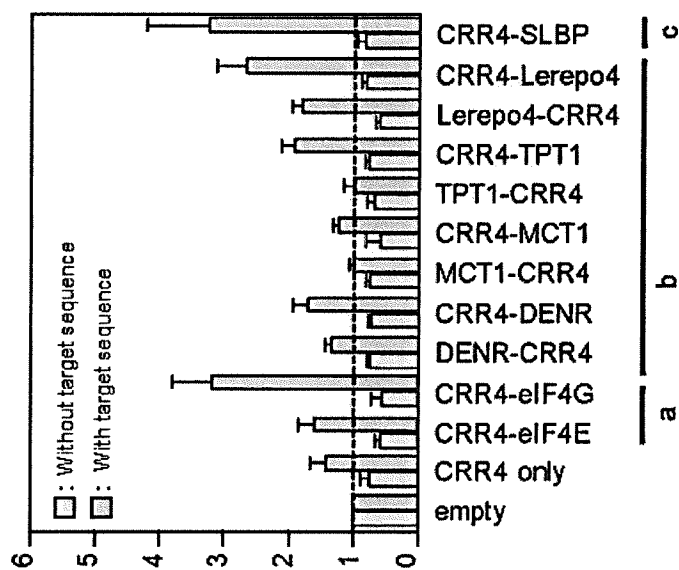


[Figure 5]

| Effector domain                          | Function                                                                                                   |
|------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 1. Ribosome binding                      |                                                                                                            |
| a. Translation-initiation related factor |                                                                                                            |
| eIF4E                                    | Cap binding protein                                                                                        |
| eIF4G                                    | eIF4 scaffold                                                                                              |
| b. Ribosome-binding protein              |                                                                                                            |
| DENR                                     | Density-regulated protein                                                                                  |
| MCT-1                                    | Malignant T-cell amplified sequence 1, RNA binding (PUA domain)                                            |
| TPT1                                     | Translationally-controlled tumor protein                                                                   |
| Lerepo4                                  | Zinc finger CCHH-domain, putative polysome binding                                                         |
| 2. Transport Activity                    |                                                                                                            |
| SLBP                                     | Related with stem-loop binding protein, translation factor of Histone, increase in export efficiency, etc. |

- a. Translation initiation factor
- b. Ribosome-binding protein
- c. Nucleus-cytoplasm transport

# 1. Activation of translation by ribosome recruiting



[Figure 6]

| Effector domain          | Function                                                    |
|--------------------------|-------------------------------------------------------------|
| 3. ER binding            |                                                             |
| a. Anchor of ER membrane |                                                             |
| SEC61B                   | Subunit of composite for inserting protein into ER membrane |
| TRAP-alpha               | Subunit of composite for inserting protein into ER membrane |
| SRAalpha                 | Subunit of composite for inserting protein into ER membrane |
| Dia1                     | Cytochrome b5 reductase 3                                   |
| P180                     | Functions to pass mRNA to ribosome on ER?                   |
| b. ER retention signal   |                                                             |
| KDEL (KEEL)              |                                                             |
| c. Ersignal peptide      |                                                             |
| MGWSCIIILFLVATATGAHS     | Added to N-terminal, recognized by SRP, and localized on ER |

- d. ER anchor translation initiation factor
- e. ER retention
- f. ER localized

2. Activation of translation by ER tethering

