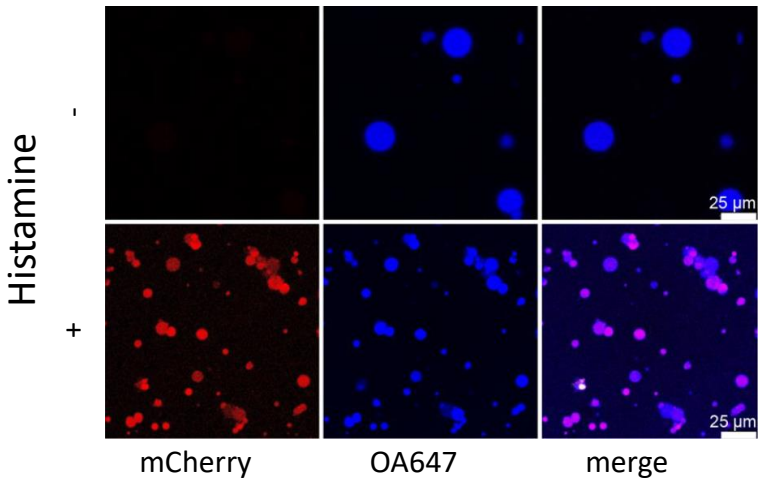
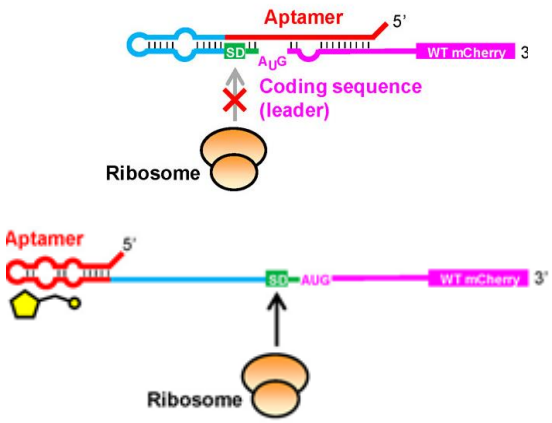
Histamine-responsive riboswitch





Applications

- Histamine-responsive protein translation
- Artificial cells

Problem & Solution

Riboswitches are a protein translational regulatory mechanism using RNA sequences that change their conformation by binding to small molecules. Until now, artificial gene control mechanisms using small molecules have been used to control transcription by regulating the activity of transcription factors using small molecules. In contrast, this technology has the advantage that the protein translation can be directly controlled according to the histamine concentration, so the mechanism is simple and the response to histamine can be obtained more quickly than the mechanism to control transcription using a small compound.

Benefits

Compact: Approximately 100 bases
Simple: Regulating protein translation directly
Histamine response: protein translation in response to histamine concentration (ON / OFF ratio more than 30 times at 5 mM)
Applicable to artificial cells

Patent pending

Keywords

RNA, riboswitch, histamine, artificial cells

For more information

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