

Amyloid precursor protein (APP) proteolysis detection using a dual luciferase reporter assay

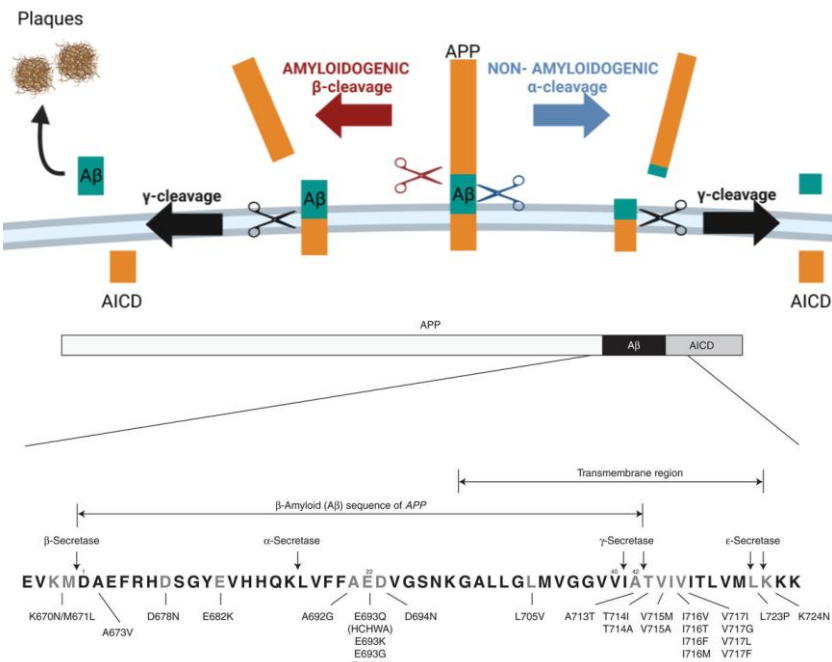
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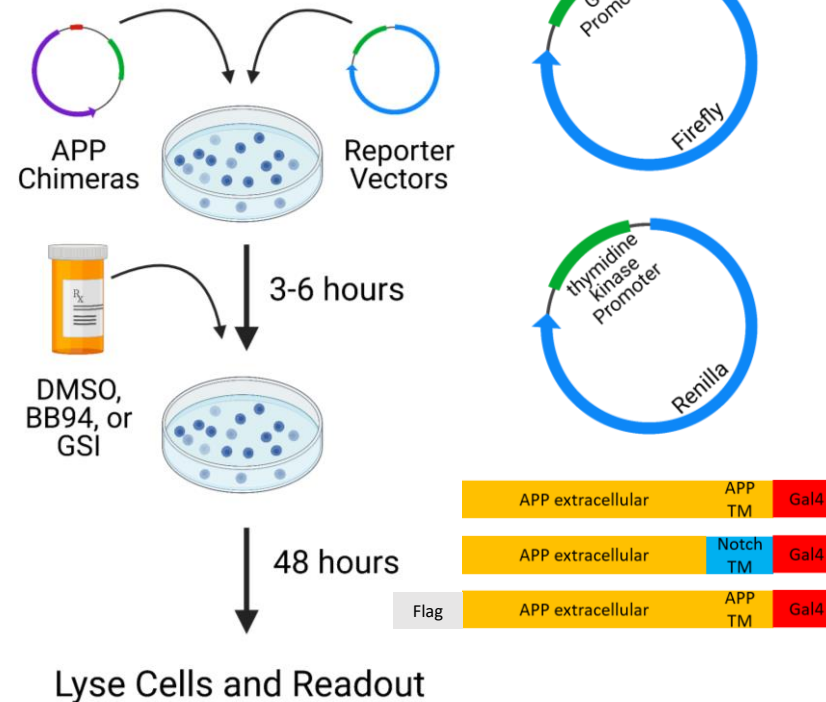
Introduction

- Alzheimer's Disease (AD) is a progressive disease typically characterized by dementia and loss of function
- Amyloid plaques from APP proteolysis are a major finding in the brain nerves

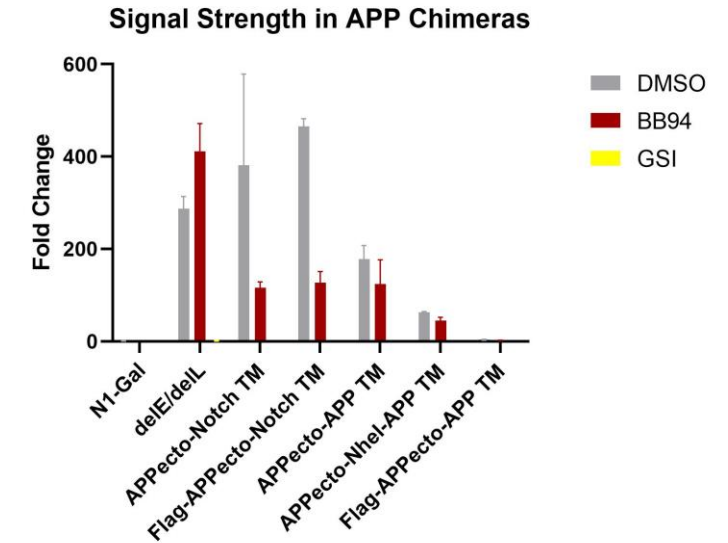


Assay Rational and Design

- A high throughput dual luciferase assay utilizing synthetic Notch (synNotch) receptor has been developed and characterized
- Therefore, we aimed to use a similar strategy with APP



Results



Future Directions

- Test AD-associated mutations to further validate assay
- Test assay in neuronal cell lines
- Use the assay to test modulators of APP proteolysis

References

Julia TCW, and Alison M. Goate Cold Spring Harb Perspect Med 2017;7:a024539

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- Therefore, there is a need to identify modulators of this proteolysis
- However, no high throughput assay exists to readout APP proteolysis