



# Improved p38 MAPK Assay

Tech ID: 33796 / UC Case 2024-740-0

## BACKGROUND

The p38 mitogen activated protein kinase (p38 MAPK) when misregulated is implicated in a variety of human diseases and conditions including Alzheimer's disease, Parkinson's disease, HIV, cancer, and among many others. Identifying how p38 regulates different diseases ranging from cancer to Alzheimer's can lead to improved compounds that can target a specific disease with less toxicity.

## BRIEF DESCRIPTION

Professor Thomas Kuhlman and colleagues from the University of California, Riverside have developed a novel method named "Chemical Selectivity Readouts" and FRET sensor that can be used to identify new p38 MAPK inhibitors for development. Chemical Selectivity Readouts work by measuring p38 MAPK inhibition through the detection of resonance selectivity by Fourier transform. This technology is advantageous because it can enable the research and development of new and improved drugs targeting p38 MAPK for specific diseases like cancer and neurological disorders. Past clinical development roadblocks can be overcome with this new assay by developing more specific and less toxic drugs.

## CONTACT

Grace Yee  
[grace.yee@ucr.edu](mailto:grace.yee@ucr.edu)  
tel: 951-827-2212.

## OTHER INFORMATION

### KEYWORDS

Resonance, resonance selectivity, chemical resonance, chemical resonance selectivity, p38 MAPK (mitogen activated protein kinase)

### CATEGORIZED AS

- ▶ [Research Tools](#)
- ▶ [Screening Assays](#)

### RELATED CASES

2024-740-0

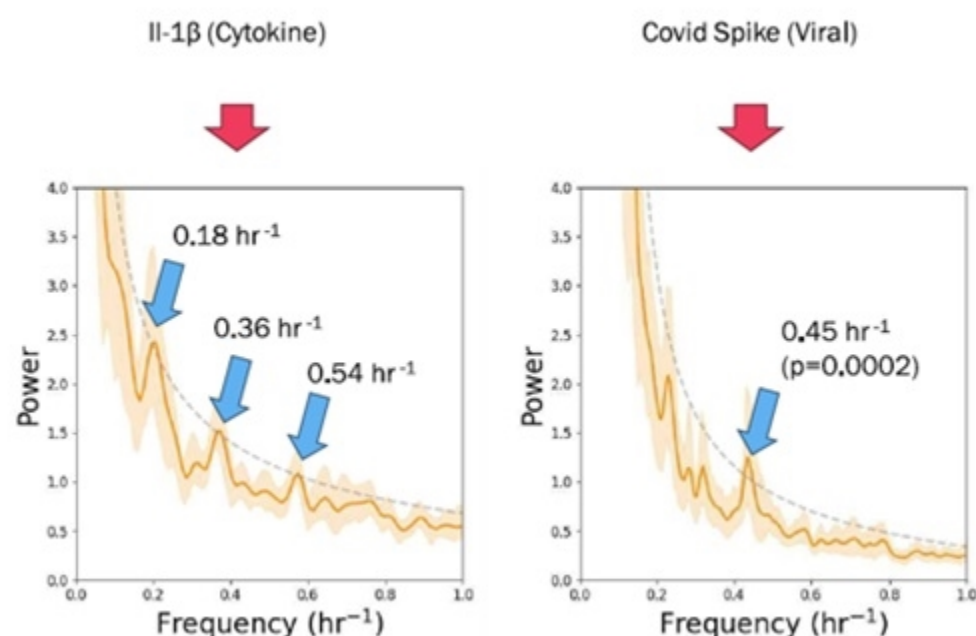


Fig 1: Agents binding to the UCR FRET sensors measured by Fourier transform provide the above Chemical Resonance Selectivity readouts.

## APPLICATIONS

- ▶ For use in developing therapeutic treatments for human diseases and conditions including Alzheimer's disease, Parkinson's disease, HIV, and cancer.

## PATENT STATUS

Patent Pending

## RELATED MATERIALS

- ▶ [Kuhlman, Thomas E., Worcester, Michael \(2023, March 8th\). A novel FRET-based reporter for real time interrogation of p38-mediated stress response in human cells \[Conference presentation abstract\]. APS March Meeting 2023, Las Vegas, Nevada, United States. - 03/08/2023](#)

**University of California, Riverside**

**Office of Technology Commercialization**

200 University Office Building,

Riverside, CA 92521

[otc@ucr.edu](mailto:otc@ucr.edu)

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