

Fluorescent Methods to Study Peptides and Proteins *in vitro*

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Fluorescent sensors are an invaluable tool that can be used to study the dynamics of proteins and peptides in living cells. This work outlines the development of novel methods to study peptide and protein interactions in live cells, focussing on the design and implementation of a protein-specific fluorescent redox sensor by utilising the HaloTag System.

Copper transport receptor 1 (CTR1) was selected as a protein of interest as its redox activity is not well known. Tagging this protein with FlavinTag revealed an interesting relationship between local redox activity and copper homeostasis.

