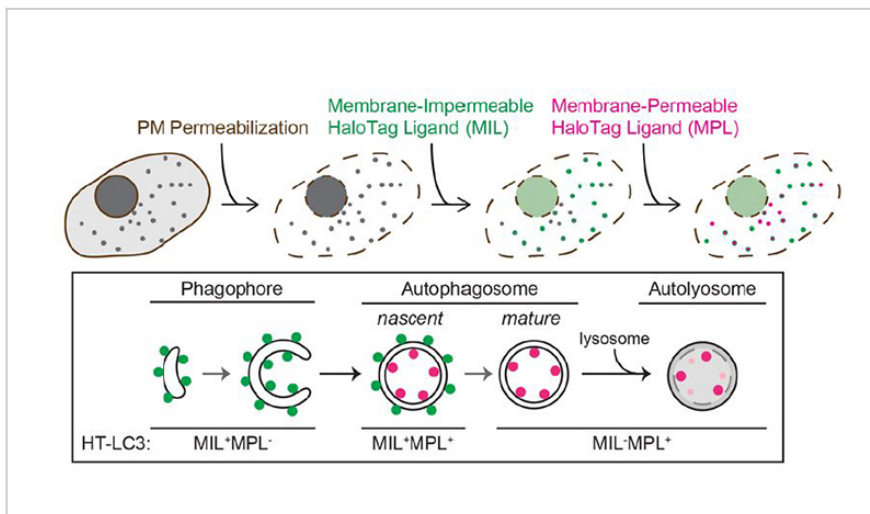


Development of an assay for monitoring autophagosome completion

ID# 2017-4640



HT-LC3 Autophagosome Completion Assay

Technology Summary

Since the discovery of the autophagy-related genes and their implications in a variety of human diseases, autophagy has become one of the most rapidly growing areas in the health science field. However, the mechanism of autophagosome formation remains unclear and has been hindered by technical challenges associated with distinguishing unclosed and closed autophagosomal membranes. This technology provides superior signal-to-noise ratio and high reproducibility to differentially detect phagophores, nascent autophagosomes, and mature autophagosomal structures in situ.

Application & Market Utility

This invention provides the basis for developing an autophagosome biogenesis assay kit, which can be used for determining the roles of genes of interest in autophagosome formation and maturation (e.g. phagophore closure, LC3-II delipidation), identifying novel autophagy regulators, and screening for drugs that modulate autophagosome formation (e.g. phagophore closure inhibitors/inducers, LC3- II delipidation inhibitors/inducers).

Next Steps

Fully developed; currently seeking licensing partner for commercialization.

TECHNOLOGY READINESS LEVEL

4-7

Seeking

Investment | Licensing | Research

Keywords

- phagophore closure
- autophagosome closure
- autophagosome completion
- LC3
- autophagy

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