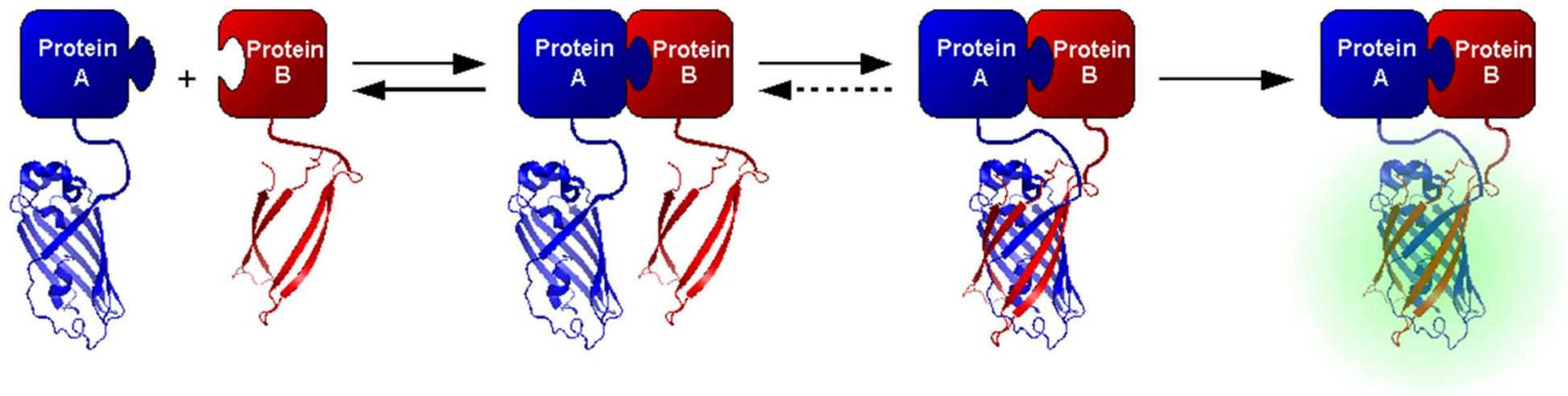
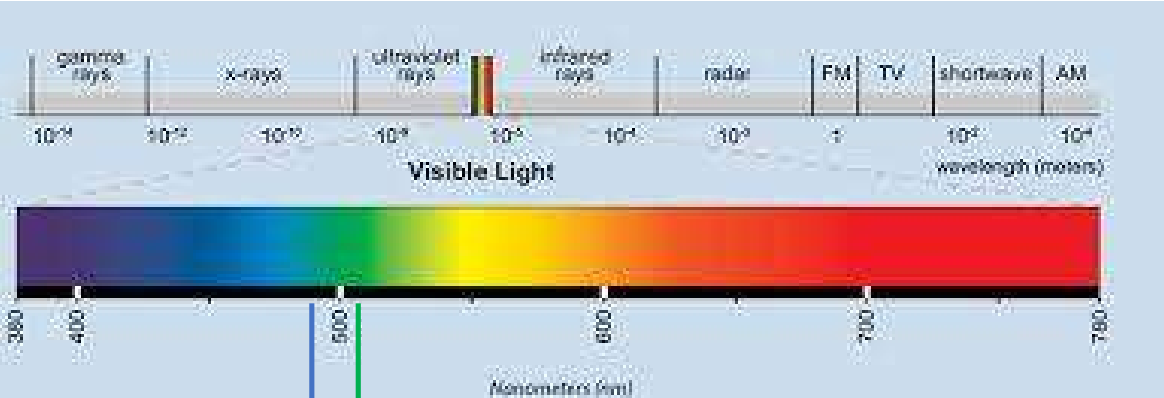


GFP can be expressed as two separate segments that combine within cells to yield a functional fluorescent protein:

Ex. BiFC (Bimolecular fluorescence complementation)

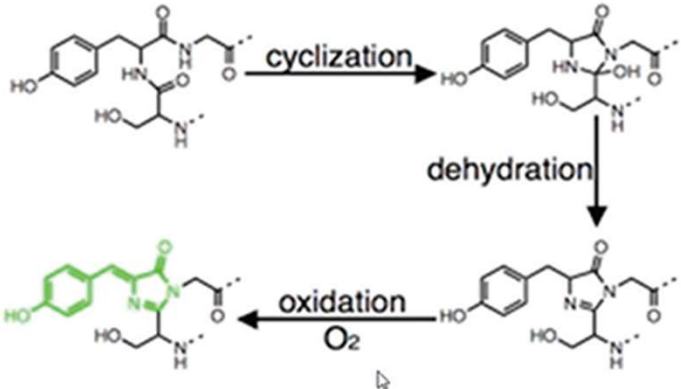
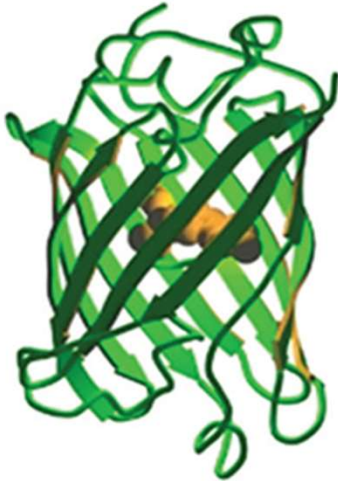


GFP - Protein that exhibits bright green fluorescence when exposed to light in the blue to UV range

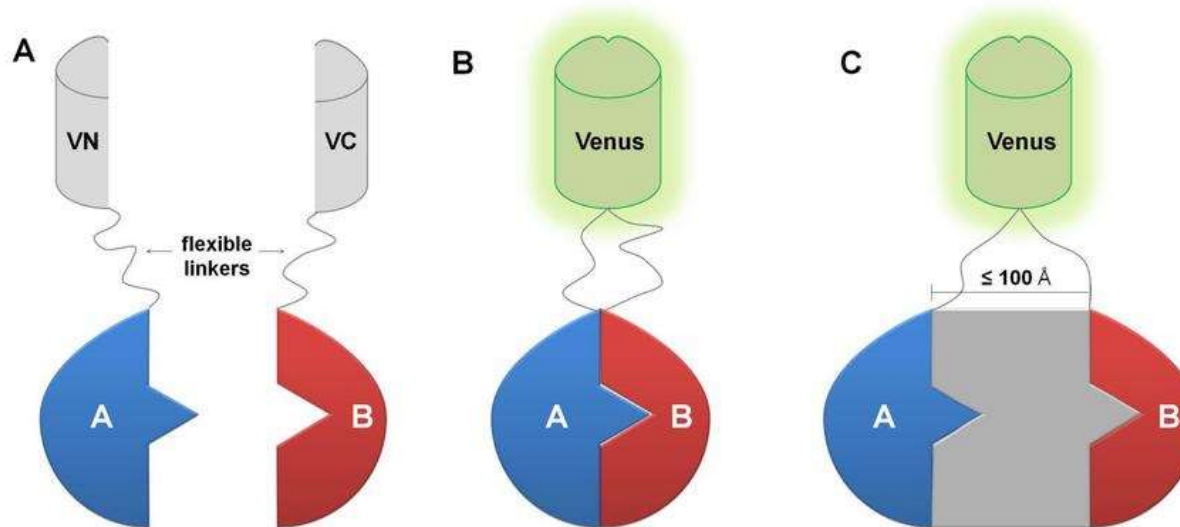


488 nm – excitation peak for EGFP

Emission peak at 509 nm



Bimolecular Fluorescence Complementation (BiFC)



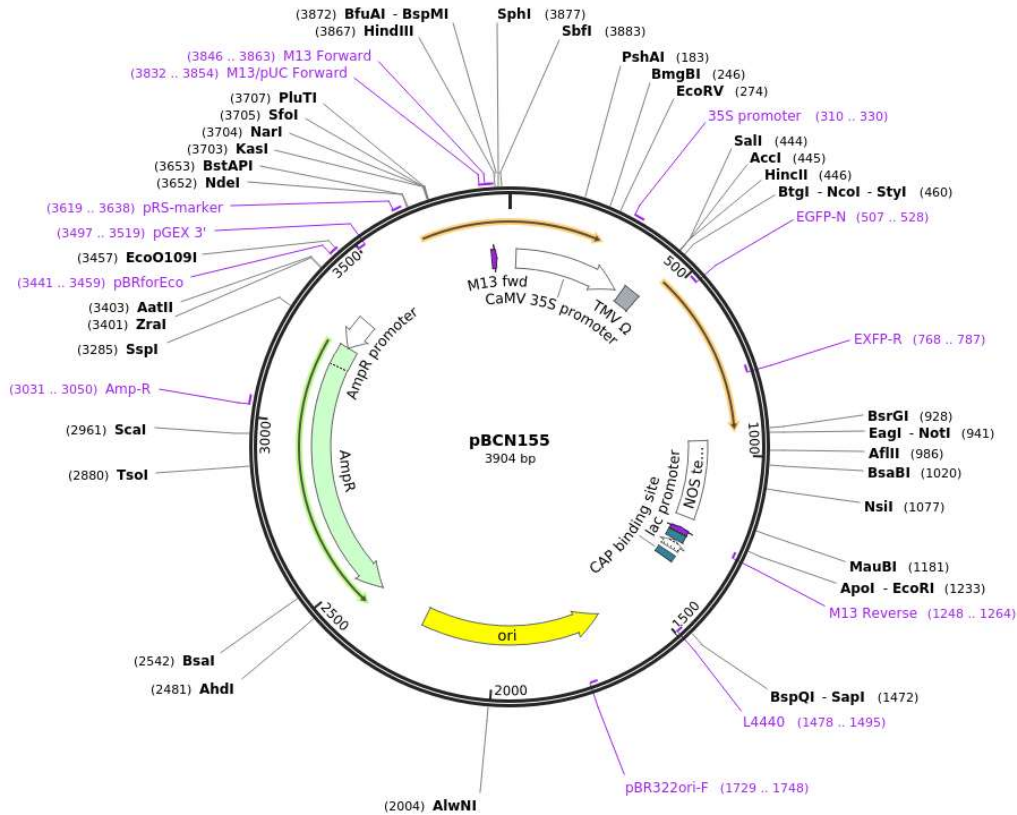
Yellow fluorescent protein (YFP)
–"Venus"- Genetic mutant of
green fluorescent protein (GFP).

The requirement for fluorophore reconstitution is spatial proximity of the two proteins of interest, not necessarily direct interaction between them.

All commonly used BiFC vectors encode linker sequences (of varying lengths, but typically at least 5 amino acids long) between the FP fragment and the gene of interest, which may be important to provide sufficient structural flexibility of the fusion proteins to facilitate FP fragment reconstitution after interaction between the proteins of interest has occurred.

CLC (clathrin light chain)

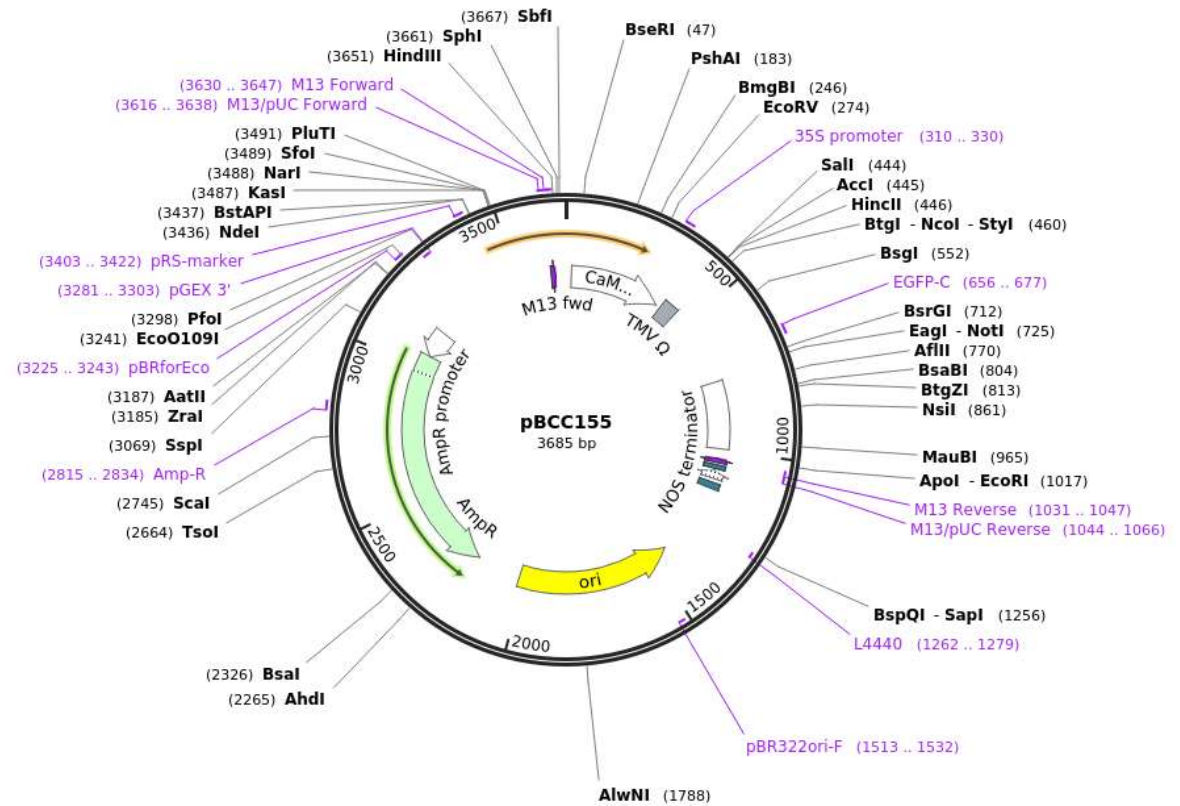
Created with SnapGene®



X

CHC (clathrin heavy chain)

Created with SnapGene®



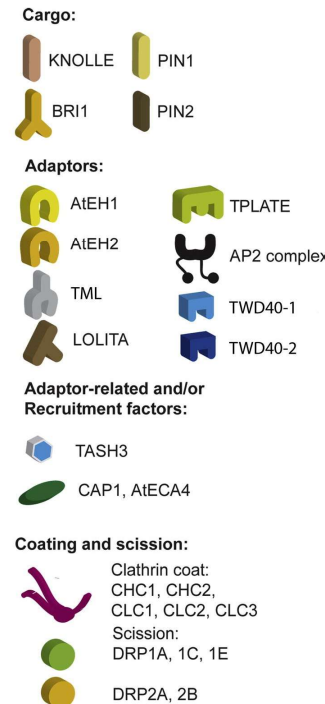
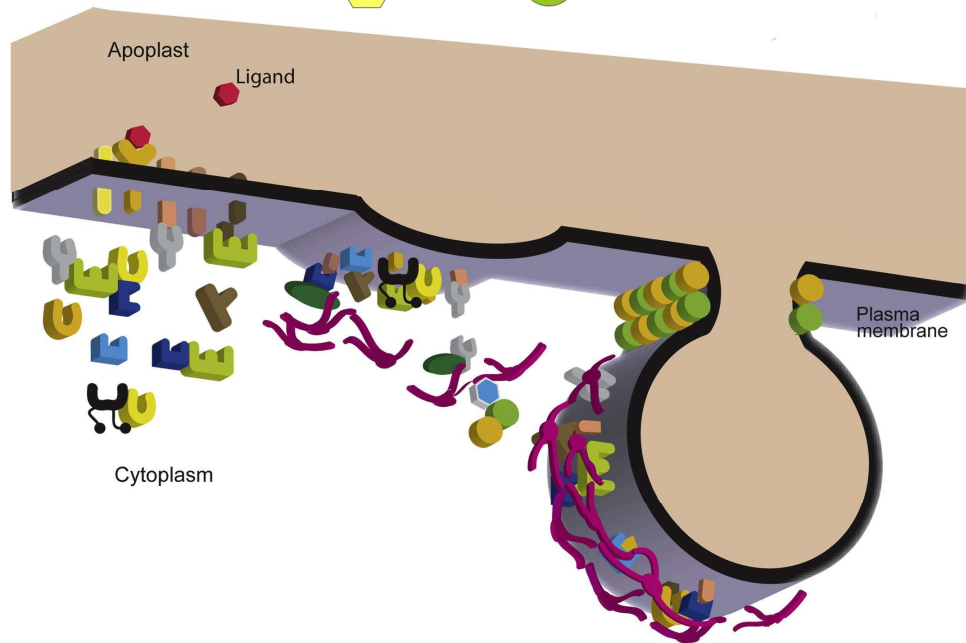
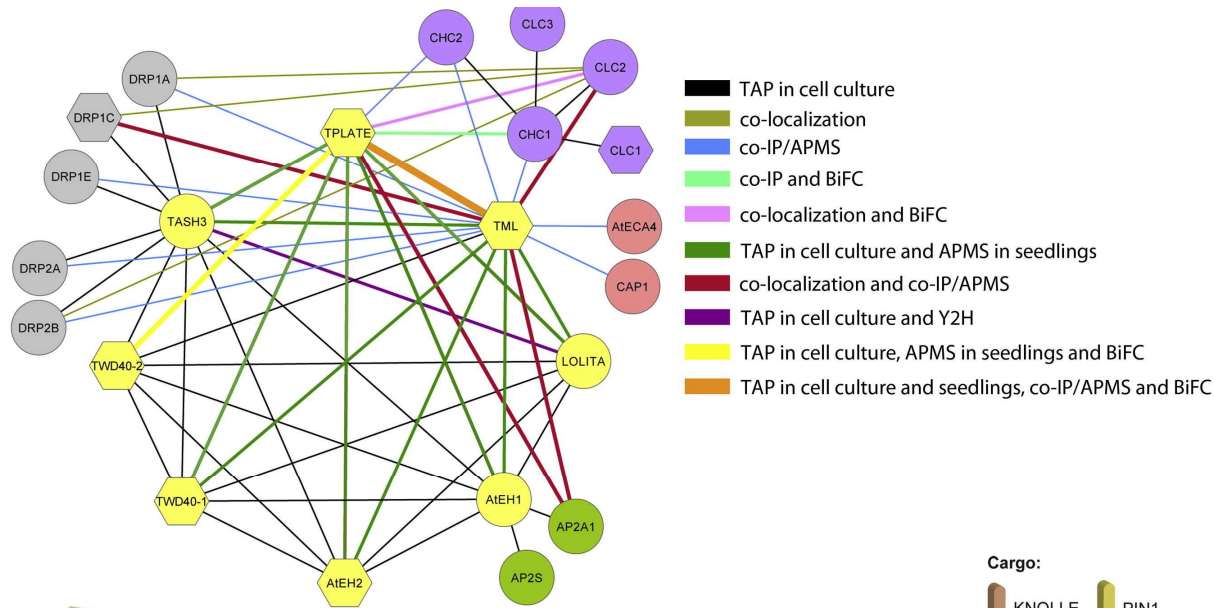
BiFC vector for transient expression of EGFP (1–155)

BiFC vector for transient expression of EGFP (155–239)

There is no gene for selection on plants

The TPLATE Adaptor Complex Drives Clathrin-Mediated Endocytosis in Plants

A large network of accessory proteins also function in linking the cargo as well as membrane lipids to the AP-2/clathrin assembly, inducing membrane curvature for invagination of the PM into vesicles.



adaptor proteins with domains such as epsin N-terminal homology (ENTH), AP180 N-terminal homology (ANTH):

ENTH – pollen specific

ECA4 – ANTH domain adaptor protein

CAP1 - ANTH domain adaptor protein

TPLATE is a plant-specific adaptin-like protein