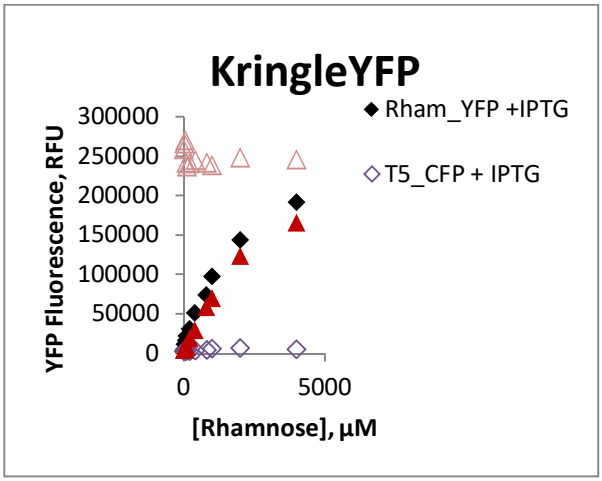
Dual or co-expression of ATUM (DNA2.0) Fluorescent Proteins

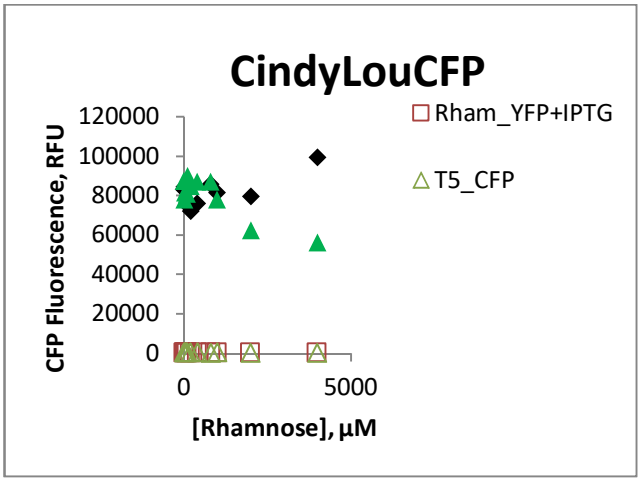
I. Host: *E.coli*

Dual expression of KringleYFP and CindyLouCFP in a single *E. coli* strain

KringleYFP (yellow fluorescent protein) controlled by the rhamnose inducible promoter and CindyLouCFP (cyan fluorescent protein) controlled by the T5 promoter were co-transformed into a single strain. Shown is orthogonal expression of the KringleYFP and CyanCFP in a two vector system.

- Cloning of YFP and CFP into two pDAUGHTER vectors – rham_YFP and T5_CFP
- Orthogonal expression of YFP and CFP in a single strain
- **No interference observed – expression is exclusive**
- Tunable induction with Rhamnose
- Comparable expression with Rham and T5 promoters

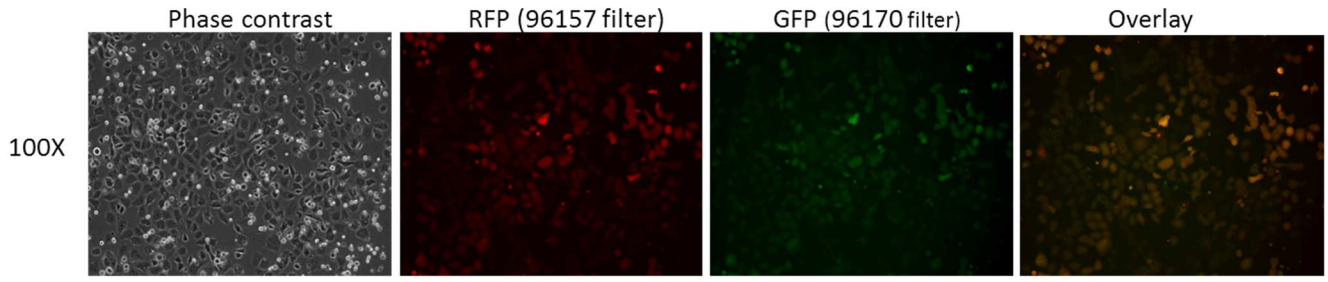




II. Host: Mammalian

Bicistronic expression of CometGFP and RudolphRFP using IRES in HEK293 cells

RudolphRFP and CometGFP are co-expressed in HEK293 cells, seen as yellow in the overlay.



Bicistronic expression of CometGFP and Rudolph-RFP using 2A in HEK293 cells

CometGFP has a nuclear localization signal that transports it to the nucleus, while RudolphRFP has a cytoplasmic caax signal and thus expresses in the cytoplasm. A good separation of the two FPs is observed (shown in overlay) with GFP localized to the nucleus (green) and RFP localized to the cytoplasm (red surrounding the green nucleus).