Supplementary Information Titles

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Article Title:	**A molecularly engineered split reporter for imaging protein-protein interactions with positron emission tomography**
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Supplementary Item & Number	**Title or Caption**
Supplementary Methods	Supplementary Methods
Supplementary Discussion	Supplementary Discussion
Supplementary Figure 1	Circular permutation strategy for TK
Supplementary Figure 2	Schematic representation of the plasmid vector constructs
Supplementary Figure 3	Schematic representation of the plasmid vector constructs
Supplementary Figure 4	Schematic representation of the single plasmid vector construct
Supplementary Figure 5	Fluorescence micrographs
Supplementary Figure 6	Ribbon diagram of the quaternary structure of the HSV1-TK homodimer
Supplementary Figure 7	Structure and circular permutation strategy for TK
Supplementary Figure 8	Graph to show enzyme activity of five circularly permuted variants of TK
Supplementary Figure 9	Graph to show comparison of coexpressed chimeras carrying nTK or cTK with FRB/FKBP12
Supplementary Figure 10	Graph to show time course of enzyme activity of a PCA using coexpressed chimeras
Supplementary Figure 11	Graph to show comparison of coexpressed chimeras
Supplementary Figure 12	Graph to show comparison of coexpressed chimeras

Supplementary Figure 13	Graph to show comparison of coexpressed chimeras
Supplementary Figure 14	Expression levels of FRB (mTOR) and FKBP12
Supplementary Figure 15	The uncut version of the Western blot showing expression levels of FKBP12
Supplementary Figure 16	Graph to show in vitro response of 293T cells stably transfected with pcDNA-*p*Ubi-FKBP12-cTK-*p*CMV-nTK$_{(V119C)}$-FRB after 36 h exposure to escalating doses of rapamycin,
Supplementary Figure 17	Graph to show in vitro response of 293T cells stably transfected with pcDNA-*p*Ubi-FKBP12-cTK-*p*CMV-nTK$_{(V119C)}$-FRB after 36 h exposure to escalating doses of ascomycin (FK506) along with a fixed 40 nM of rapamycin
Supplementary Figure 18	Graph to show reversibility of the split TK-based PCA using a ligand-reversible dimer of a mutant FKBP12 called F_M (F36M)
Supplementary Figure 19	Graph to show reversibility of the split TK-based PCA using a ligand-reversible dimer of a mutant FKBP12 called F_M (F36M) that can be disrupted by FK506
Supplementary Table 1	Supplementary Table 1
Supplementary Table 2	Supplementary Table 2
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