

Chemical Dimerizer rCD1

Chemical Dimerizers are powerful tools for non-invasive manipulation of enzyme activities in intact cells.

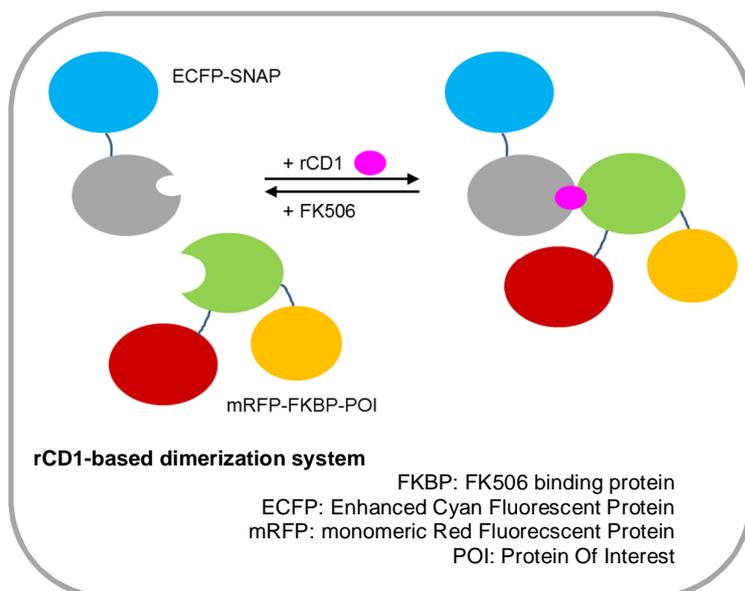
The first rapidly reversible chemical dimerization system – **rCD1** -, which permits to determine kinetics of lipid metabolizing enzymes in living cells, is now available at **SiChem** *. This new system was applied to **induce and stop** the activity of phosphatidyl 3-kinase (PI₃K). All CID (chemical induced dimerization) systems are generally irreversible unless a sophisticated technique that requires 2 CIDs is applied. This strategy enables to perform **dimerization in a reversible manner on single cell level**, which is convenient for **fluorescent microscopy experiments**.

This is a novel reversible dimerization system based on a standard design that brings in a first step a given active enzyme to defined cellular location by adding rCD1. In a second step, the translocated enzyme is rapidly removed by addition of a competing ligand (FK506)

This Chemical Dimerizer will be suitable to measure many different metabolic processes in intact cells !

SC-7000: 100 µg: 190 EUR
500 µg: 590 EUR

- ▶ 100 µg are enough for app. 20 experiments
- ▶ soluble in e.g. imaging buffer (1 µM)
- ▶ or use a stock solution: 2-4 mM in **dry DMSO**
- ▶ contains also a vial of FK506 !



Publications for further information

- 1 A single-cell model of PIP3 dynamics using chemical dimerization
 MacNamara A, Stein F, Feng S, Schultz C, Saez-Rodriguez J.
Bioorg. Med. Chem. 2015, 23(12): 2868 / doi:10.1016/j.bmc.2015.04.074
- 2 Reversible chemical dimerizer-induced recovery of PIP2 levels moves clathrin to the plasma membrane
 Schifferer M, Feng S, Stein F, Tischer C, Schultz C.
Bioorg. Med. Chem. 2015, 23 (12): 2862 / doi:10.1016/j.bmc.2015.03.048
- 3 A Rapidly Reversible Chemical Dimerizer System to Study Lipid Signaling in Living Cells
 Feng, S., Laketa, V., Stein, F., Rutkowska, A., MacNamara, A., Depner, S., Klingmüller, U., Saez-Rodriguez, J. & Schultz, C.
Angew Chem Int Ed Engl. 2014, 53: 6720 / doi: 10.1002/anie.201402294

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