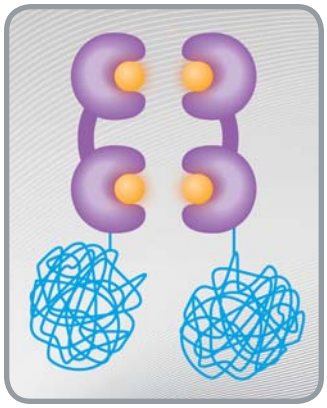
Reverse Dimerization Citations

Clontech's **iDimerize™ Reverse Dimerization System** was previously available from ARIAD as the RPD Regulated Secretion/Aggregation Kit.



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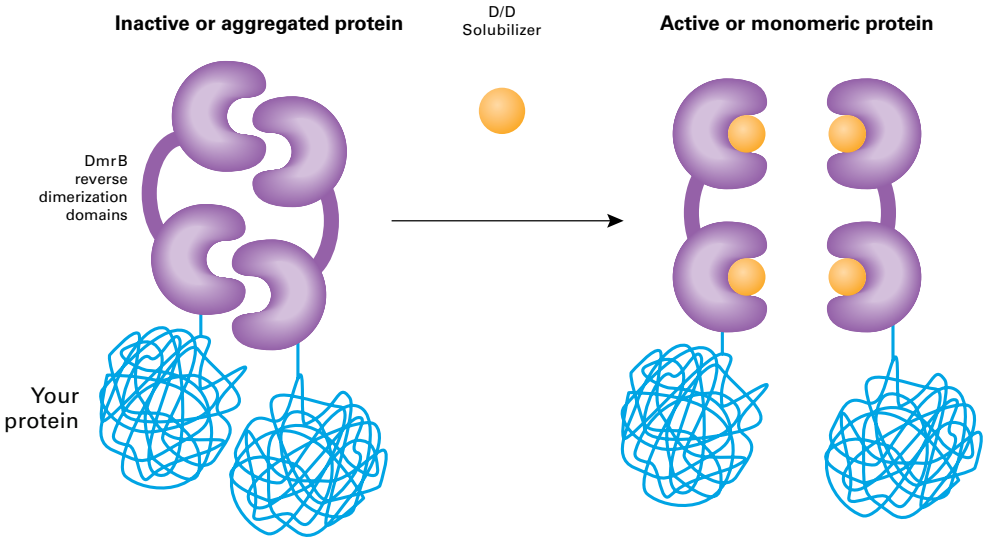

The Reverse Dimerization System incorporates a binding motif (purple) that causes protein aggregation and a dimerizer (yellow) which can be used to disaggregate (solubilize) the proteins. This system can be used to study intracellular transport and to induce regulated secretion.

2011 Citations

Bond, L. M. *et al.* (2011) *Mol. Biol. Cell.* **22**(1):54–65. Myosin VI and its binding partner optineurin are involved in secretory vesicle fusion at the plasma membrane. A live-cell constitutive secretion assay defined roles for myosin VI and optineurin in discrete stages of secretion.

Products

ARIAD/ARGENT Product	Clontech Product	Cat. #	Package Size
RPD Regulated Secretion/Aggregation Kit	iDimerize Reverse Dimerization System	635066	each
	Lenti-X™ iDimerize Reverse Dimerization System	635076	each
AP21998	D/D Solubilizer	635054 635053	500 µl 5 x 500 µl

The system contains a vector set and 500 µl ligand (0.5 mM). The D/D solubilizer is not identical to ARIAD's AP21998, but it is functionally equivalent.

Notice to Purchaser

Your use of these products and technologies is subject to compliance with any applicable licensing requirements described on the product's web page at http://www.clontech.com. It is your responsibility to review, understand and adhere to any restrictions imposed by such statements.

2011 Citations…continued

Grigoriev, I. *et al.* (2011) *Curr. Biol.* **21**(11):967–974. Rab6, Rab8, and MICAL3 cooperate in controlling docking and fusion of exocytotic carriers. A GFP-tagged reporter protein was used to confirm the involvement of Rab8A in constitutive secretion. Secretion was stimulated using AP21998.

Selyunin, A. S. *et al.* (2011) *Nature.* **469**(7328):107–111. The assembly of a GTPase-kinase signalling complex by a bacterial catalytic scaffold. A functional screen showed that the enterohaemorrhagic *Escherichia coli* O157:H7 type III effector EspG is a regulator of endomembrane trafficking.

2010 Citations

Gordon, D. E. *et al.* (2010) *Traffic.* **11**(9):1191–1204. A targeted siRNA screen to identify SNAREs required for constitutive secretion in mammalian cells. The Ariad RPD Regulated Secretion/Aggregation Kit was used to quantify constitutive secretion in mammalian cells with an EGFP reporter.

Kuhn, Y. *et al.* (2010) *Traffic.* **11**(2):236–249. Trafficking of the phosphoprotein PfCRT to the digestive vacuolar membrane in *Plasmodium falciparum.* The trafficking route of the chloroquine resistance transporter PfCRT was analyzed using the anti-aggregation ligand AP21998.

Raina, K., and Crews, C. M. (2010) *J. Biol. Chem.* **285**(15):11057–11060. Chemical inducers of targeted protein degradation. Minireview focusing a new approach to study protein function at the post-translational level: chemical induction of targeted protein degradation.

Winslow, A. R. *et al.* (2010) *J. Cell Biol.* **190**(6):1023–1037. α-Synuclein impairs macroautophagy: implications for Parkinson's disease. Alpha-synuclein overexpression impairs macroautophagy in cells and transgenic mice via Rab1a inhibition. Rab1a overexpression rescues this defect.

2009 Citations

Hansen, J. L. *et al.* (2009) *J. Biol. Chem.* **284**(3):1831–1839. Lack of evidence for AT1R/B2R heterodimerization in COS-7, HEK293, and NIH3T3 cells: how common is the AT1R/B2R heterodimer? Four independent research groups investigated angiotensin II type 1 receptor (AT1R) signaling in three different cell lines using multiple assays (including the ARGENT Regulated Secretion/Aggregation Kit). In contrast to previous reports, the data collectively suggest that AT1R/bradykinin B2 receptor (B2R) heterodimerization does not occur as a natural consequence of their simultaneous expression in the same cell, nor does the B2R influence AT1R signaling.

Kwok, C. *et al.* (2009) *Proc. Natl. Acad. Sci. USA* **106**(8):2853–2858. Transforming activity of AML1-ETO is independent of CBFbeta and ETO interaction but requires formation of homo-oligomeric complexes. ARGENT Regulated Secretion/Aggregation was used to study the role of AML1/RUNX1 and CBF beta fusion proteins in acute leukemia. AML1-ETO (AE)-mediated transformation of primary hematopoietic cells was found to be critically dependent on the DNA binding and homo-oligomeric properties of the fusion protein.

2008 Citations

Vogel, R., Mammeri, H., and Mallet, J. (2008) *Hum. Gene Ther.* **19**(2):167–178. Lentiviral vectors mediate non-immunosuppressive rapamycin analog-induced production of secreted therapeutic factors in the brain: regulation at the level of transcription and exocytosis. The ARGENT Regulated Secretion/Aggregation Kit was used to control the expression and secretion of therapeutic polypeptides in mice.

2007 Citations

Song, G. J., Jones, B. W., and Hinkle, P. M. (2007) *Proc. Natl. Acad. Sci. USA* **104**(46):18303–18308. Dimerization of the thyrotropin-releasing hormone receptor potentiates hormone-dependent receptor phosphorylation. Regulated receptor dimerization increases thyrotropin-releasing hormone induced receptor endocytosis.

2006 Citations

Kwok, C. *et al.* (2006) *Cancer Cell* **9**(2):95–108. Forced homo-oligomerization of RARalpha leads to transformation of primary hematopoietic cells. Dimerization is required for the transforming activity of RAR alpha. Addition of AP21998 reverses dimerization and inhibits transformation.

Sawyer, G. W., Ehlert, F. J., and Hart, J. P. (2006) *J. Pharmacol. Toxicol. Methods* **53**(3):219–233. Determination of the rate of muscarinic M1 receptor plasma membrane delivery using a regulated secretion/aggregation system. The ARGENT Regulated Secretion/Aggregation Kit and AP21998 were used to control the delivery rate of the human muscarinic M1 receptor to the plasma membrane.