TECHNOLOGY

A stable Receptor-Associated Protein (RAP) protein

OVERVIEW

A novel Stable Receptor-Associated Protein (RAP), an antagonist of lipoprotein receptor-related protein 1 (LRP1). Dr. Strickland at UMB has developed a stable RAP D3 domain (with 6 mutations) that is resistant to both pH- and heat-induced denaturation. The molecule binds to lipoprotein receptor-related protein 1 (LRP1) with high affinity and inhibits LRP1 function (both *in vitro* and *in vivo*), thus suggesting that the mutated RAP protein may be a useful tool in understanding lipoprotein metabolism, cell signaling, modulation of blood brain barrier integrity, and blood coagulation and fibrinolysis. When RAP is administered IV post-stroke, it results in significant regaining of motor activity and a reduction in BBB leakage. RAP may also hold therapeutic promise in management of risk of bleeding in hemophiliac patients.

Publication: Generation of a potent Low Density Lipoprotein Receptor-related Protein 1 (LRP1) antagonist by engineering a stable form of the Receptor-Associated Protein (RAP) D3 domain. J Biol Chem. 2015 Jul 10;290(28):17262-8.

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CATEGORIES

- Research Tools, Antibodies, & Reagents

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