Product Data Sheet

Product Name: Rac GTPase fragment
Cat. No.: GP10032

Chemical Properties

Cas. No.			
SMILES	NC(C(C)C)C(NC(CC1=CC=CC=C1)C(NC(CC(O)=O)C(NC(CCC(O)=O)C(NC(C)C(NC(C(NC(CCCNC(N)=N)C(NC(C)C(NC(C(C)C)C(O)=O)=C		
Formula	$C_{46}H_{74}N_{12}O_{14}$	M.Wt	1019.15
Solubility	≥ 101.9mg/mL in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Rac GTPase fragment		

Background

Rac GTPase fragment, (C46H74N12O14), a peptide with the sequence H2N-Val-Phe-Asp-Glu-Ala-Ile-Arg-Ala-Val-OH, MW= 1019.15. Rac is a subfamily of the Rho family of GTPases, small signaling G proteins (more specifically a GTPase). Rac1 is thought to play a significant role in the development of various cancers, including melanoma [1] and non-small cell lung cancer[2]. Rac1 is a small (~21 kDa) signaling G protein (more specifically a GTPase), and is a member of the Rac subfamily of the family Rho family of GTPases. Members of this superfamily appear to regulate a diverse array of cellular events, including the control of cell growth, cytoskeletal reorganization, and the activation of protein kinases Rac1 is a pleiotropic regulator of many cellular processes, including the cell cycle, cell-cell adhesion, motility (through the actin network), and of epithelial differentiation [3].

References:
1. Hodis, E; Watson, IR; Kryukov, GV; Arold, ST; Imielinski, M; Theurillat, JP; Nickerson, E; Auclair, D; Li, L; Place, C; Dicara, D; Ramos, AH; Lawrence, MS; Cibulskis, K; Sivachenko, A; Voet, D; Saksena, G; Stransky, N; Onofrio, RC; Winckler, W; Ardlie, K; Wagle, N; Wargo, J; Chong, K; Morton, DL; Stemke-Hale, K; Chen, G; Noble, M; Meyerson, M; Ladbury, JE; Davies, MA; Gershenwald, JE; Wagner, SN; Hoon, DS; Schadendorf, D; Lander, ES; Gabriel, SB; Getz, G; Garraway, LA; Chin, L (2012 Jul 18). "A landscape of driver mutations in melanoma.". Cell.
2. Stallings-Mann, M. L.; Waldmann, J.; Zhang, Y.; Miller, E.; Gauthier, M. L.; Visscher, D. W.; Downey, G. P.; Radisky, E. S. et al. (2012). "Matrix Metalloproteinase Induction of Rac1b, a Key Effector of Lung Cancer Progression". Science Translational Medicine 4 (142): 142ra95-142ra95.
3. Ridley A. (2006). "Rho GTPases and actin dynamics in membrane protrusions and vesicle trafficking". Trends Cell Biol 16 (10): 522-9.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA