

Product Data Sheet

Product Name: Rac GTPase fragment

Cat. No.: GP10032

Chemical Properties

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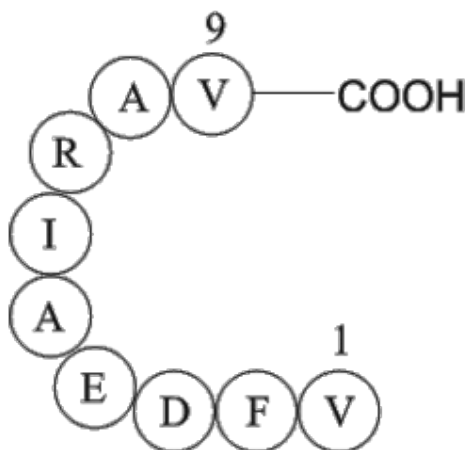
Formula $C_{46}H_{74}N_{12}O_{14}$ M.Wt 1019.15

Solubility $\geq 101.9\text{mg/mL}$ in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Rac GTPase fragment, ($C_{46}H_{74}N_{12}O_{14}$), a peptide with the sequence $\text{H}_2\text{N-Val-Phe-Asp-Glu-Ala-Ile-Arg-Ala-Val-OH}$, 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 melanoma¹ and non-small cell lung cancer². Rac1 is a small (~21

Caution: Product has not been fully validated for medical applications. For research use only.

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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.

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