

Product Data Sheet

Product Name: CHAPS
Cat. No.: GC11975

Chemical Properties

Cas. No. 75621-03-3

Chemical Name 3-[dimethyl-3-[[[(4R)-4-[(3R,5S,7R,8R,9S,10S,12S,13R,14S,17R)-3,7,12-trihydroxy-10,13-dimethyl-2,3,4,5,6,7,8,9,11,12,14,15,16,17-tetradecahydro-1H-cyclopenta[a]phenanthren-17-yl]pentanoyl]amino]propyl]azaniumyl]propane-1-sulfonate

SMILES CC(CCC(=O)NCCC[N+](C)(C)CCCS(=O)(=O)[O-])C1CCC2C1(C(CC3C2C(CC4C3(CCC(C4)O)C)O)O)C

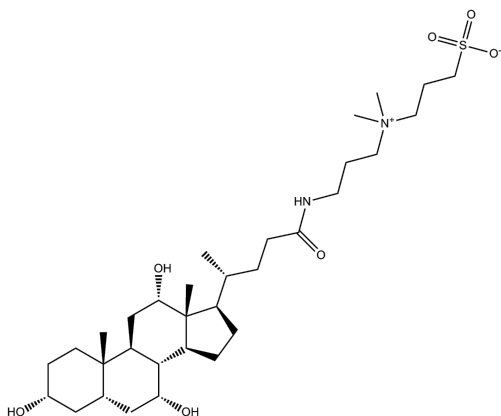
Formula $C_{32}H_{58}N_2O_7S$ M.Wt 614.88

Solubility ≥ 61.5 mg/mL in Water 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

CHAPS is a zwitterionic nondenaturing detergent for solubilizing membrane proteins. Target: CHAPS is often used as a detergent in the solubilization and purification of membrane proteins for several advantageous reasons. CHAPS detergent is non-denaturing to membrane proteins, can solubilize proteins, disaggregate protein-protein interactions and is electrically neutral. CHAPS is also useful in

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ion exchange chromatography and isoelectric focusing as it is zwitterionic and does not exhibit a net charge between pH 2 to 12. The critical micelle concentration of CHAPS is 6-10mM.

References:

- [1]. Ofri D, Ritter AM, Liu YF et al. Characterization of solubilized opioid receptors: reconstitution and uncoupling of guanine nucleotide-sensitive agonist binding. J Neurochem. 1992 Feb;58(2):628-35.
- [2]. Banerjee P, Joo JB, Buse JT, Dawson G. Differential solubilization of lipids along with membrane proteins by different classes of detergents. Chem Phys Lipids. 1995 Aug 1;77(1):65-78.
- [3]. Pasquali C, Fialka I, Huber LA. Preparative two-dimensional gel electrophoresis of membrane proteins. Electrophoresis. 1997 Dec;18(14):2573-81.
- [4]. Menshikova I, Menshikov E, Filenko N, Lyubchenko YL. Nucleosomes structure and dynamics: effect of CHAPS. Int J Biochem Mol Biol. 2011;2(2):129-137.
- [5]. Krofli A, Sarac B, Be ter-Roga M. Thermodynamic characterization of 3-[(3-cholamidopropyl)-dimethylammonium]-1-propanesulfonate (CHAPS) micellization using isothermal titration calorimetry: temperature, salt, and pH dependence. Langmuir. 2012 Jul 17;28(

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