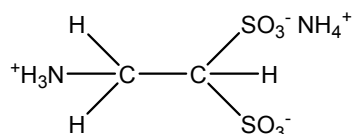


Catalog # 02-0570 Ammonium 2-aminoethane-1,1-disulfonic acid hydrate, min. 95%

**Technical Note:**

1. This di-sulfonated building block is recommended for post-synthetic water-solubilization of hydrophobic, molecules for applications in biological media, especially organic dyes, fluorophores, azo dyes^[1], bodipy^[2], coumarin^[3] and xanthene dyes^[4]. This includes organic supramolecular compounds such as cryptophanes^[5], through aminolysis reactions of activated esters, activated carbamates (or carbonates) and isothiocyanates. Such reactions can be performed either in aqueous media (Schotten-Baumann conditions), or in anhydrous organic media (by converting this di-sulfonated taurine analog into the corresponding tributylammonium or tetrabutylammonium salt^[2,4]). Such methodology is also applicable for sulfonation of biomolecules such as peptides and nucleic acids, for fine-tuning their net electric charge^[6]. A further derivatization of this unusual amine with 3-azidopropanoic acid, 3-mercaptopropanoic acid, or 4-pentynoic acid, provides a di-sulfonated linker that is reactive in either "click" reactions (1,3-dipolar cycloadditions), S_NAr or Sonogashira cross-couplings^[1].

References:

1. *Chem.-Eur., J.*, **2013**, *19*, 1686.
2. *New J. Chem.*, **2013**, *37*, 1016.
3. *Dyes Pigm.*, **2014**, *110*, 270.
4. *Tetrahedron Lett.*, **2010**, *51*, 3304.
5. *Chem. Commun.*, **2011**, *47*, 9702.
6. *Bioconjugate Chem.*, **2014**, *25*, 1000.