

Product Data Sheet

Product Name: BTAA
Cat. No.: GC30061

Chemical Properties

Cas. No. 1334179-85-9

SMILES O=C(O)CN1N=NC(CN(CC2=CN(C(C)(C)C)N=N2)CC3=CN(C(C)(C)C)N=N3)=C1

Formula $C_{19}H_{30}N_{10}O_2$ M.Wt 430.51

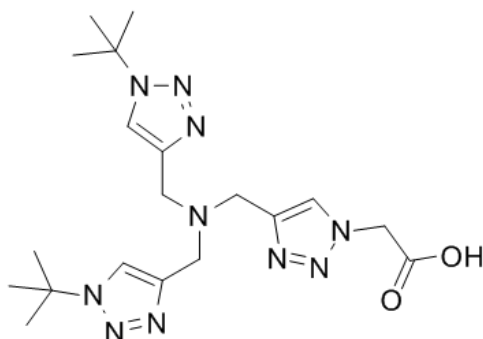
Solubility Water : 5 mg/mL (11.61 mM);
DMSO : ≥ 100 mg/mL

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

BTAA, a (Cu(I)) ligand stabilizer and catalyst, can enhance bioorthogonal click reactions and reduce cytotoxicity by lowering the amount of copper ions used. BTAA can be used with azide to label and detect azide-labeled complexes in Jurkat cells, zebrafish, and bacteria [1,3].

Experimental proof that 50 μM BTAA-Cu(I) complex has no effect on cell viability [2]. BTAA-Cu(I)

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

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catalyst provided the strongest labeling of the SiaNAz-displaying cells, yielding cell-associated Alexa Fluor 488 signal 3 to 4-fold higher than the signal achieved^[3]. Cu-BTTAA performs significantly better as a catalyst than Cu-THPTA or Cu-TBTA. BTTAA has been shown to perform much better than THPTA or TBTA ^[4,5].

References:

- [1] Haldón E, Nicasio MC, Pérez PJ. Copper-catalysed azide-alkyne cycloadditions (CuAAC): an update. *Org Biomol Chem*. 2015 Oct 7;13(37):9528-50.
- [2] Yang M, Yang Y, Chen PR. Transition-Metal-Catalyzed Bioorthogonal Cycloaddition Reactions. *Top Curr Chem (Cham)*. 2016 Feb;374(1):2.
- [3] Besanceney-Webler C, Jiang H, Zheng T, Feng L, Soriano del Amo D, Wang W, Klivansky LM, Marlow FL, Liu Y, Wu P. Increasing the efficacy of bioorthogonal click reactions for bioconjugation: a comparative study. *Angew Chem Int Ed Engl*. 2011 Aug 22;50(35):8051-6.
- [4] Besanceney-Webler C, Jiang H, Zheng T, Feng L, Soriano del Amo D, Wang W, Klivansky LM, Marlow FL, Liu Y, Wu P. Increasing the efficacy of bioorthogonal click reactions for bioconjugation: a comparative study. *Angew Chem Int Ed Engl*. 2011 Aug 22;50(35):8051-6.
- [5] Loh CT, Ozawa K, Tuck KL, Barlow N, Huber T, Otting G, Graham B. Lanthanide tags for site-specific ligation to an unnatural amino acid and generation of pseudocontact shifts in proteins. *Bioconjug Chem*. 2013 Feb 20;24(2):260-8.

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