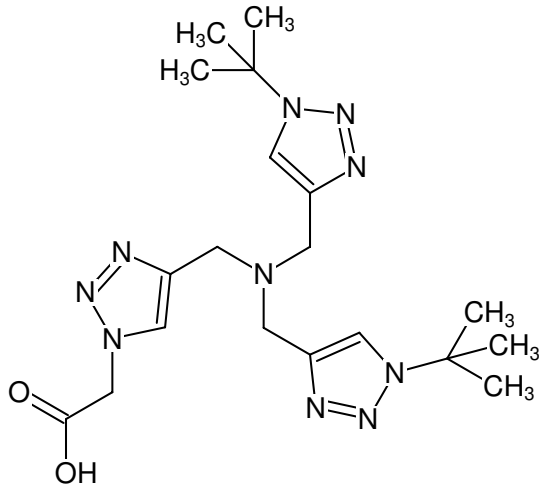
DATA SHEET

Jena Bioscience

BTTAA

2-(4-((bis((1-(tert-butyl)-1H-1,2,3-triazol-4-yl)methyl)amino)methyl)-1H-1,2,3-triazol-1-yl)acetic acid

Cat. No.	Amount
CLK-067-25	25 mg
CLK-067-100	100 mg



Structural formula of BTTAA

For general laboratory use.

Shipping: shipped at ambient temperature

Storage Conditions: store at -20 °C

Short term exposure (up to 1 week cumulative) to ambient temperature possible.

Shelf Life: 12 months after date of delivery

Molecular Formula: $C_{19}H_{30}N_{10}O_2$

Molecular Weight: 430.51 g/mol

Exact Mass: 430.26 g/mol

Purity: ≥ 95 % (HPLC)

Form: solid

Color: white to off-white

Solubility: water, DMSO, DMF, MeOH

Description:
BTTAA is a water-soluble, very effective ligand for Cu(I)-catalyzed Alkyne-Azide click chemistry reactions (CuAAC). It serves a dual purpose: 1) Accelaration of the CuAAC reaction by maintaining the Cu(I) oxidation state of copper sources and 2) Protection of biomolecules from oxidative damage during the labeling reaction[1,2].

BTTAA is a superior alternative to water-insoluble TBTA.

A stock solution can be prepared in ddH_2O and subsequently be stored at -20°C. Avoid freeze-thaw cycles.

Presolski *et al.*[3] and Hong *et al.*[4] provide a general protocol for CuAAC reactions that may be used as a starting point for the set up and optimization of individual assays.

Related Products:
Copper (II)-Sulphate ($CuSO_4$), #CLK-MI004
Sodium Ascorbate (Na-Ascorbate), #CLK-MI005
THPTA, #CLK-1010
Picolyl-Azide-PEG_4-Biotin, #CLK-1167

Selected References:
[1] Besanceney-Webler *et al.* (2011) Increasing the Efficiacy of Bioorthogonal Click Reactions for Bioconjugation: A Comparative Study *Angew. Chem. Int. Ed.* **50**:8051.
[2] Uttamapinant *et al.* (2012) Fast, Cell-Compatible Click Chemistry with Copper-Chelating Azides for Biomolecular Labeling. *Angew. Chem. Int. Ed.* **51**:5852.
[3] Presolski *et al.* (2011) Copper-Catalyzed Azide-Alkyne Click Chemistry for Bioconjugation. *Current Protocols in Chemical Biology* **3**:153.
[4] Hong *et al.* (2011) Analysis and Optimization of Copper-Catalyzed Azide-Alkyne Cycloaddition for Bioconjugation. *Angew. Chem. Int. Ed.* **48**:9879.