Product Data Sheet

Product Name: Photo-lysine (Photo lysine)
Cat. No.: GC30239

Chemical Properties

Cas. No.	1863117-91-2		
SMILES	NCCC1(N=N1)C[C@@H](C(O)=O)N		
Formula	$C_6H_{12}N_4O_2$	M.Wt	172.19
Solubility	Soluble in Water	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	Photo-lysine (Photo lysine)		

Background

Photo-lysine, a new lysine-based photo-reactive amino acid, captures proteins that bind lysine post-translational modifications.

Photo-lysine is designed and synthesized by incorporating a photo-cross-linker (diazirine) into the side chain of natural lysine. Photo-lysine, which is readily incorporated into proteins by native mammalian translation machinery, can be used to capture and identify proteins that recognize lysine post-translational modifications (PTMs), including 'readers' and 'erasers' of histone modifications. Photo-lysine can be incorporated into MDH2 and mediate photo-cross-linking to fix protein-protein interactions in cells. UV irradiation of cells in the presence of photo-lysine induced robust cross-linking of HSP90β and HSP60. Photo-lysine has higher efficiency than photo-leucine for photo-cross-linking of the two chaperone proteins. Photo-lysine enables capture of the heterodimer of proteins Ku70 and Ku80 within a protein complex. Photo-lysine enables identification of histone- and chromatin-binding proteins[1].

[1]. Yang T, et al. Photo-lysine captures proteins that bind lysine post-translational modifications. Nat Chem Biol. 2016 Feb;12(2):70-2.

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