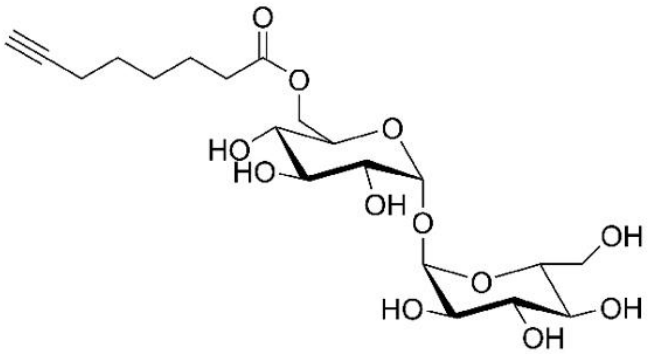
www.vectorlabs.com
e: customerservice@vectorlabs.com
t: (650) 697-3600

O-ALKYNE-TREHALOSE (O-ALKTMM)

SKU: CCT-1473



Description

Metabolic labeling with unnatural sugar substrates is a powerful alternative for investigating glycoconjugates in living organisms. Trehalose glycolipids can be metabolically labeled with O-Alkyne-Trehalose (O-AlkTMM) analogues in live mycobacteria, enabling bioorthogonal ligation with azide-functionalized fluorescent probes. This strategy can be used for imaging glycolipid distribution, trafficking, and dynamics as well as metabolite profiling and discovery. In addition, the O-AlkTMM may be employed to assess the effects of various perturbations (e.g., environmental stress, antibiotic treatment, genetic manipulation) on trehalose glycolipids and their associated biosynthetic pathways. O-AlkTMM analogue is likely to be metabolized in most, if not all, mycobacterial species given the highly conserved nature of the involved biosynthetic machinery. Importantly, the absence of trehalose metabolism in mammals invites the application of this chemical tool to investigate the trehalome during mycobacterial infection in host cells and model organisms.

In summary, O-Alkyne-Trehalose enables sensitive, selective, and simultaneous detection of AGM and trehalose glycolipids *in situ*, providing a platform to study the mycomembrane in its native setting. O-AlkTMM is of particular interest because it allows rapid detection of the arabinogalactan mycolylation in whole cells for the first time. The TMM-based reporter are mycobacteria-specific, connoting potential for detection of bacteria in complex settings, for example, in sputum samples or during infection.

Specifications

www.vectorlabs.com
e: customerservice@vectorlabs.com
t: (650) 697-3600

Unit Size	5 mg, 25 mg, 100 mg
Molecular weight	464.46
Chemical composition	C20H32O12
CAS	N/A
Solubility	Water, DMSO, DMF
Purity	>97% (H NMR)
Appearance	White to grey amorphous solid
Storage Conditions	-20°C.
Shipping Conditions	Ambient temperature
