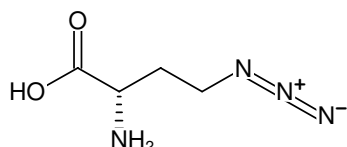




## 4-Azido-L-homoalanine HCl (L-AHA)

(S)-2-Amino-4-azidobutanoic acid hydrochloride

Cat. No.	Amount
CLK-AA005-10	10 mg
CLK-AA005-100	100 mg
CLK-AA005-500	500 mg



Structural formula of 4-Azido-L-homoalanine HCl (L-AHA)

### For general laboratory use.

**Shipping:** shipped on gel packs

**Storage Conditions:** store at 4 °C

**Additional Storage Conditions:** store dry

**Shelf Life:** 12 months after date of delivery

**Molecular Formula:** C<sub>4</sub>H<sub>8</sub>N<sub>4</sub>O<sub>2</sub>

**Molecular Weight:** 144.13 g/mol

**Exact Mass:** 144.06 g/mol

**CAS#:** 942518-29-8

**Purity:** mass identification conforms (ESI-MS)

**Form:** powder

**Color:** white

### Applications:

Proteins synthesis monitoring<sup>[1,2,3]</sup>

### Description:

4-Azido-L-homoalanine (L-AHA) provides a non-radioactive alternative to analyze the global protein synthesis in cell culture. It is cell-permeable and randomly incorporated instead of methionine during translation<sup>[1,2,3]</sup>. The resulting azide-labeled full-length proteins can subsequently be detected via Cu(I)-catalyzed or Cu(I)-free click chemistry that offers the choice to introduce a Biotin group (via Azides of Biotin or DBCO-containing Biotin, respectively) for subsequent purification tasks or a fluorescent group (via Azides of fluorescent dyes or DBCO-containing fluorescent dyes, respectively) for subsequent microscopic imaging.

Presolski *et al.*<sup>[4]</sup> and Hong *et al.*<sup>[5]</sup> provide a general protocol for Cu(I)-catalyzed click chemistry reactions that may be used as a starting point for the set up and optimization of individual assays.

### Related Products:

Copper (II)-Sulphate (CuSO<sub>4</sub>), #CLK-MI004

Tris(3-hydroxypropyltriazolylmethyl)amine (THPTA), #CLK-1010

Sodium Ascorbate (Na-Ascorbate), #CLK-MI005

### Selected References:

[1] Dieck *et al.* (2012) Metabolic Labeling with Noncanonical Amino Acids and Visualisation by Chemoselective Fluorescent Tagging. *Current Protocols in Cell Biology* **7**:7.111.

[2] Kiick *et al.* (2002) Incorporation of azides into recombinant proteins for chemoselective modification by the Staudinger ligation. *Proc. Natl. Acad. Sci. USA* **99** (1):19.

[3] Dieterich *et al.* (2010) In situ visualization and dynamics of newly synthesized proteins in rat hippocampal neurons. *Nature Neuroscience* **13** (7): 897.

[4] Presolski *et al.* (2011) Copper-Catalyzed Azide-Alkyne Click Chemistry for Bioconjugation. *Current Protocols in Chemical Biology* **3**:153.

[5] Hong *et al.* (2011) Analysis and Optimization of Copper-Catalyzed Azide-Alkyne Cycloaddition for Bioconjugation. *Angew. Chem. Int. Ed.* **48**:9879.