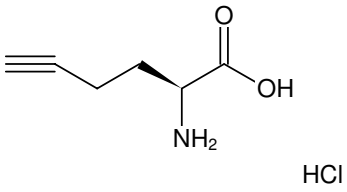
DATA SHEET

Jena Bioscience

L-Homopropargylglycine (L-HPG)

(S)-2-Aminohex-5-ynoic acid, HCl salt

Cat. No.	Amount
CLK-1067-25	25 mg
CLK-1067-100	100 mg
CLK-1067-1000	1 g



Structural formula of L-Homopropargylglycine (L-HPG)

For research use only!

Shipping: shipped on blue ice

Storage Conditions: store at -20 °C

Additional Storage Conditions: store dry

Shelf Life: 12 months after date of delivery

Molecular Formula: $C_6H_9NO_2$ * HCl

Molecular Weight: 163.60 g/mol (HCl salt)

CAS#: 942518-19-6

Purity: ≥ 95 % (H NMR)

Form: solid

Color: off-white to grey

Applications:
Proteins synthesis monitoring[1,2,3]

Description:
L-Homopropargylglycine (L-HPG) 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[1,2,3]. The resulting alkyne-labeled full-length proteins can subsequently be detected via Cu(I)-catalyzed click chemistry that offers the choice to introduce a Biotin group (via Azides of Biotin) for subsequent purification tasks or a fluorescent group (via Azides of fluorescent dyes) for subsequent microscopic imaging.

Presolski *et al.*[4] and Hong *et al.*[5] 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 ($CuSO_4$), #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**:7.11.1.

[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.