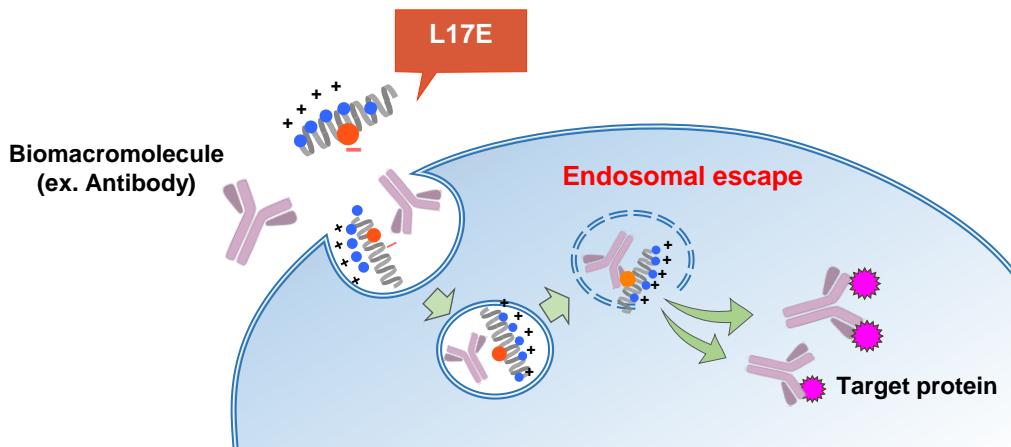


New!

# Cellular Delivery Agent – L17E

An innovative tool, developed by Futaki (Kyoto University), for **robust and highly-efficient delivery** of biomacromolecules (ex. proteins or antibodies) into the cell.

L17E peptide works by preferentially rupturing endosomes to dramatically improve the cytosolic release of endosome-trapped biomacromolecules without cell toxicity.



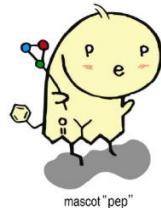
Modifications and/or conjugations will also be available via custom services. For more information, please visit Peptide Institute website.

#### References

- 1) M. Akishiba, T. Takeuchi, Y. Kawaguchi, K. Sakamoto, H. Yu, I. Nakase, T. Nakase, F. Madani, A. Gräslund, S. Futaki, *Nature Chemistry*, **9**, 751 (2017). DOI:10.1038/nchem.2779
- 2) WO2016/052442 A1

code	product	quantity	price (JPY)
<b>New</b> 3409-v	<b>L17E Cytosolic Delivery Peptide</b>	<b>0.5 mg vial</b>	<b>¥30,000</b>

This compound is manufactured and distributed by Peptide Institute, Inc. under the license of Kyoto University.



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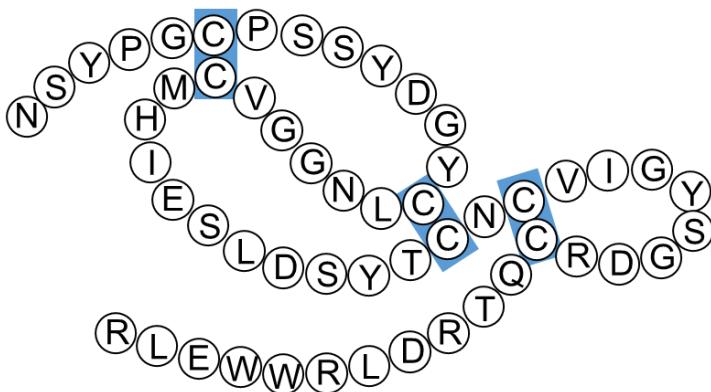
E-mail: sales@peptide.co.jp

<https://www.peptide.co.jp/>

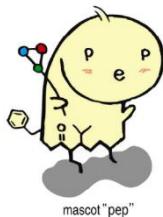
**New!**

# Synthetic EGF (Human)

Epidermal Growth Factor (EGF) EGF is a 6-kDa protein consisting of 53 amino acids residues with three intermolecular disulfide bonds. It was originally isolated from the submaxillary glands of mice by Cohen. EGF stimulates the cell proliferation and differentiation by binding the receptor EGFR.



code	product	quantity	price (JPY)
<b>New 4498-s</b>	<b>EGF (Human)</b>	<b>0.1 mg vial</b>	<b>¥10,000</b>

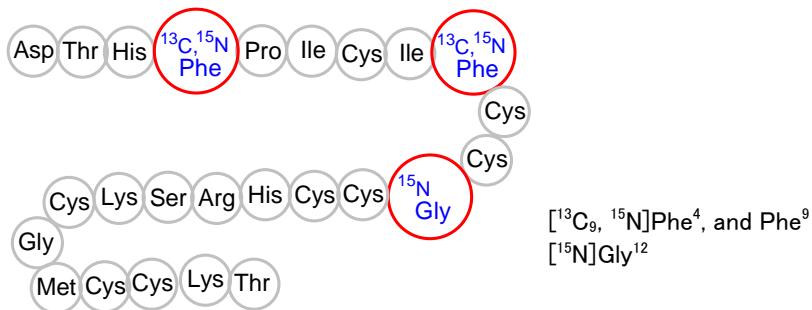
**PEPTIDE INSTITUTE, INC.**

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E-mail: sales@peptide.co.jp  
<https://www.peptide.co.jp/>

# Stable Isotope-Labeled Hepcidin

## ***Internal Standard Peptide for MS detection of Hepcidin***

**[<sup>13</sup>C<sub>18</sub>, <sup>15</sup>N<sub>3</sub>]-Hepcidin (Human)** (Trifluoroacetate Form)



(Reported disulfide bonds between Cys<sup>7</sup>-Cys<sup>23</sup>,  
Cys<sup>10</sup>-Cys<sup>13</sup>, Cys<sup>11</sup>-Cys<sup>19</sup>, and Cys<sup>14</sup>-Cys<sup>22</sup>)

### References

- 1) N. Murao, M. Ishigai, H. Yasuno, Y. Shimonaka, and Y. Aso, *Rapid Commun. Mass Spectrom.*, **21**, 4033 (2007).
- 2) T. Hosoki, K. Ikuta, Y. Shimonaka, Y. Sasaki, H. Yasuno, K. Sato, T. Ohtake, K. Sasaki, Y. Torimoto, K. Saito, and Y. Kohgo, *Proteomics Clin. Appl.*, **3**, 1256 (2009).

Code	Compound	Quantity	Price: Yen
3405-v	[ <sup>13</sup> C <sub>18</sub> , <sup>15</sup> N <sub>3</sub> ]-Hepcidin (Human)	20 µg vial	20,000
4392-s	Hepcidin / LEAP-1 (Human)	0.1 mg vial	18,000
4434-s	Hepcidin 1 (Mouse)	0.1 mg vial	22,000
4467-v	Hepcidin (Rat)	50 µg vial	28,000

Synthesis of other animal species, different length and/or labeling are also available by custom services.

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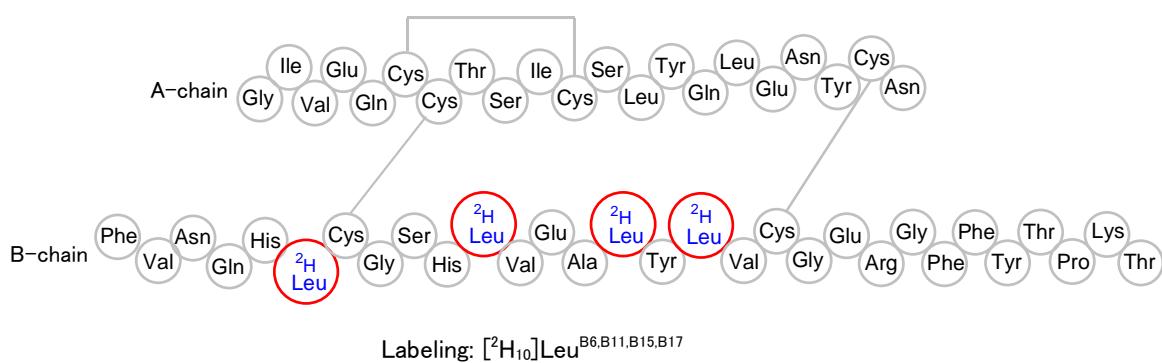
E-mail: [info@peptide.co.jp](mailto:info@peptide.co.jp)

<https://www.peptide.co.jp/>

# Stable Isotope-Labeled Insulin

***Internal Standard for MS detection of Insulin***

**4-[D10]-Leu-Insulin (Human)** (Trifluoroacetate Form)



## References

- 1) K. Van Uytfanghe, D. Rodríguez-Cabaleiro, D. Stöckl, and L.M. Thienpont, *Rapid Commun. Mass Spectrom.*, **21**, 819 (2007).
- 2) D. Rodríguez-Cabaleiro, K. Van Uytfanghe, V. Stove, T. Fiers, and L.M. Thienpont, *Clin. Chem.*, **53**, 1462 (2007).
- 3) W.G. Miller, L.M. Thienpont, K. Van Uytfanghe, P.M. Clark, P. Lindstedt, G. Nilsson, and M.W. Steffes, *Clin. Chem.*, **55**, 1011 (2009).

Code	Compound	Quantity	Price: Yen
3404-v	4-[D10]-Leu-Insulin (Human)	20 µg vial	¥20,000
4088-s	Insulin (Human)	0.1 mg vial	¥13,000
4088-v	Insulin (Human)	0.5 mg vial	¥44,000

Synthesis of other animal species, different length and/or labeling are also available by custom services.

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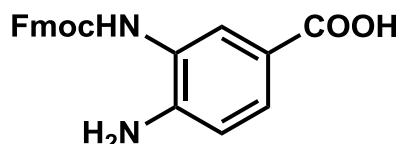
7-2-9 Saito-Asagi, Ibaraki-shi, Osaka 567-0085 Japan

E-mail: [info@peptide.co.jp](mailto:info@peptide.co.jp)

<https://www.peptide.co.jp/>

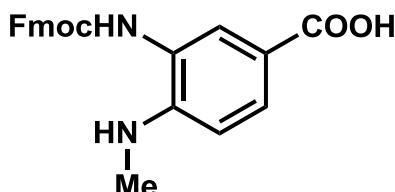
# The Dawson Linkers: Fmoc-Dbz/MeDbz

*For the preparation of  
thioester equivalents (N-Acylurea)*



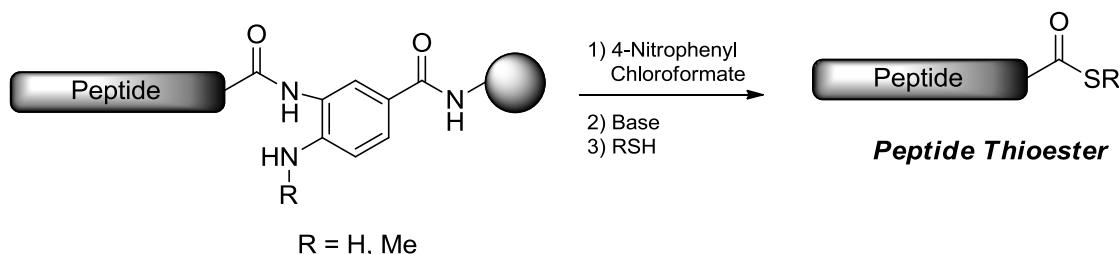
Fmoc-Dbz<sup>1)</sup>

CAS No: 1071446-05-3  
Formula: C<sub>22</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub>  
M.W.: 374.39



Fmoc-MeDbz<sup>2)</sup>

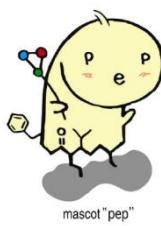
CAS No: 1788861-35-7  
Formula: C<sub>23</sub>H<sub>20</sub>N<sub>2</sub>O<sub>4</sub>  
M.W.: 388.42



#### Reference

- 1) J.B. B-Canosa, and P.E. Dawson, *Angew. Chem. Int. Ed.*, **47**, 6851 (2008).
- 2) J.B. B-Canosa, B. Nardone, F. Albericio, and P.E. Dawson, *J. Am. Chem. Soc.*, **137**, 7197 (2015).

code	product	quantity	price (JPY)
2332	Fmoc-Dbz	1 g	16,000
		5 g	26,000
2331	Fmoc-MeDbz	1 g	20,000
		5 g	70,000



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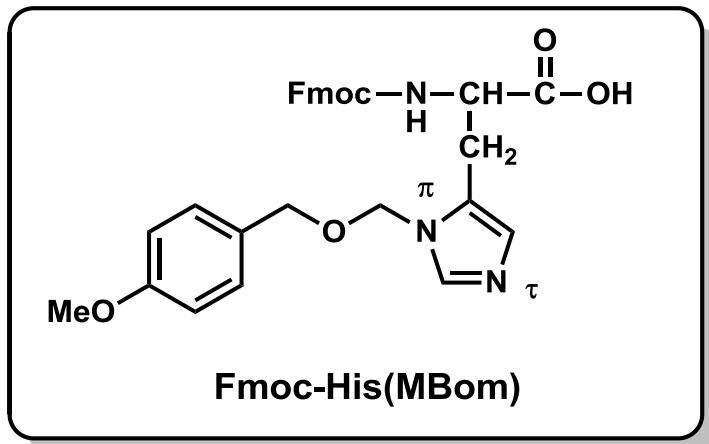
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E-mail: [info@peptide.co.jp](mailto:info@peptide.co.jp)

<https://www.peptide.co.jp/>

# Fmoc-His(MBom)

*New Histidine Derivative to Minimize Racemization Risk*



	Racemization (%) <sup>2)</sup>	
	rt	80°C*
Trt	2.9	16.6
<b>MBom</b>	<b>&lt;0.1</b>	<b>0.5</b>

Coupling conditions: HCTU, 6-Cl-HOBt in DMF  
 \* Microwave assisted peptide synthesis method

Fmoc-His(MBom) is a novel L-histidine derivative having 4-methoxybenzyloxymethyl (MBom) group at the  $N^{\pi}$ -position of imidazole ring. The  $N^{\pi}$ -MBom group has been proven to prevent racemization of His during incorporation in Fmoc-SPPS<sup>1)</sup>. By confirming the stability of MBom group against weak acid treatment, Fmoc-His(MBom) is believed to have all of the chemical properties required for conventional and/or microwave-assisted Fmoc-SPPS, alternative to Fmoc-His(Trt)<sup>2)</sup>.

Code	Compound	Quantity	Price: Yen
2328	Fmoc-His(MBom)	1 g	10,000
		5 g	45,000

bulk quantity available on request

References:

- 1) H. Hibino, and Y. Nishiuchi, *Tetrahedron Lett.*, **52**, 4947 (2011).
- 2) H. Hibino, Y. Miki, and Y. Nishiuchi, *J. Pept. Sci.*, **18**, 763 (2012).

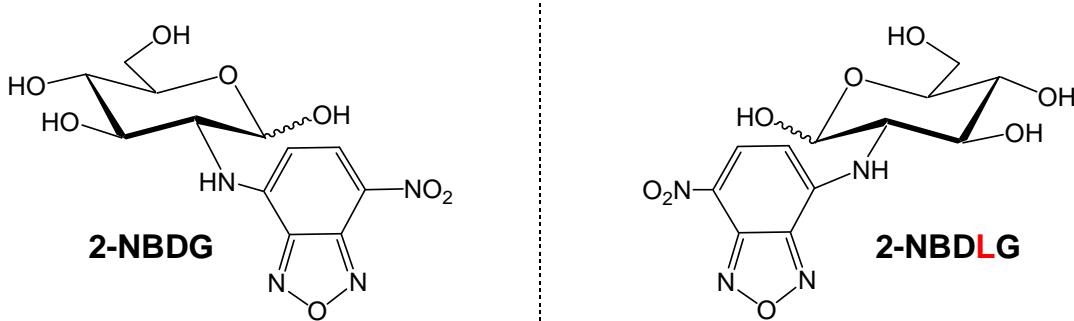
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# 2-NBDG & 2-NBDLG

*Monitoring Glucose Uptake into Single, Living Cells  
Now Available with Antipode*

2-[*N*-(7-Nitrobenz-2-Oxa-1,3-Diazol-4-yl)Amino]-2-Deoxy-D-Glucose [**2-NBDG**] is a fluorescent tracer for monitoring D-Glucose uptake into single, living cells. In addition to this widely used product, its antipodal control compound, 2-[*N*-(7-Nitrobenz-2-Oxa-1,3-Diazol-4-yl)Amino]-2-Deoxy-L-Glucose [**2-NBDLG**] is exclusively available applying newly developed synthetic method by Peptide Institute, Inc.

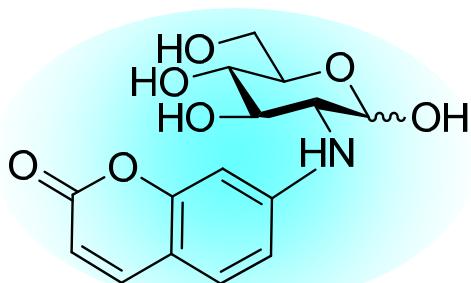


Code	Compound	Quantity	Price: Yen
23002-v	2-NBDG	0.5 mg vial	5,000
23003-v	2-NBDLG	0.5 mg vial	15,000

This compound is distributed through Peptide Institute, Inc. under the license of Hirosaki University Graduate School of Medicine, Tokyo University of Agriculture and Technology, and Peptide Institute, Inc.



## Novel Fluorescent Glucose Tracer CDG



Blue Fluorescent Glucose Tracer  
CDG code 23006-v

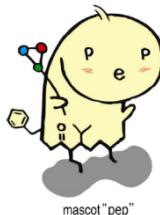
2-NBDG (code 23002-v) has been widely utilized for monitoring D-glucose uptake through glucose transpoters (GLUTs) in a variety of mammalian cells<sup>1)</sup>. By contrast, GLUT-permeable D-glucose derivatives emitting other fluorescence have been long awaited.

CDG (2-Deoxy-2-(2-oxo-2H-chromen-7-yl)amino-D-glucose) (code 23006-v) was developed as a blue fluorescent glucose tracer which attached with a coumarin<sup>2)3)</sup>. Pharmacological profiles with or without inhibitors (Cytochalasin B, Phloretin, and a large amount of glucose) suggest that CDG is taken up through GLUTs in a manner similar to that reported for 2-NBDG. CDG may contribute to further understanding of the glucose study.

### References

- 1) *Nature Protocols*, **2**, 753 (2007). (*Protocols for Measurement*)
- 2) *Org. Lett.*, **18**, 1338 (2016). (*Chem. Synthesis & Glucose Uptake in Living Cells*)
- 3) Patent WO2015156264 A1

Code	Compound	Quantity	Price : Yen
23006-v	CDG	0.5 mg vial	¥15,000



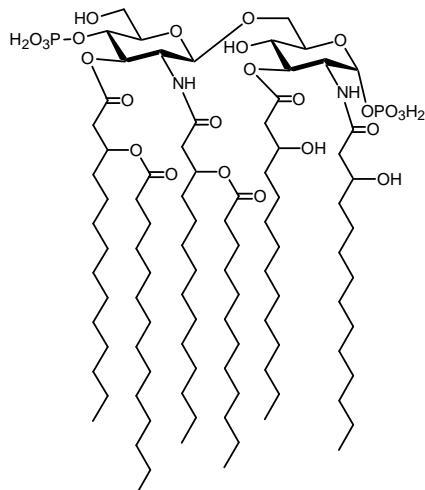
### PEPTIDE INSTITUTE, INC.

Phone : +81-72-643-4480      FAX: +81-72-643-4422  
<https://www.peptide.co.jp/en>      E-mail: sales@peptide.co.jp

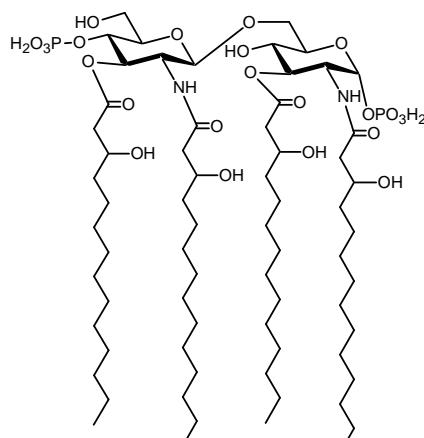
# Synthetic Lipid A

*No Contamination from Natural Source!*  
*Salmonella-type Now Available*

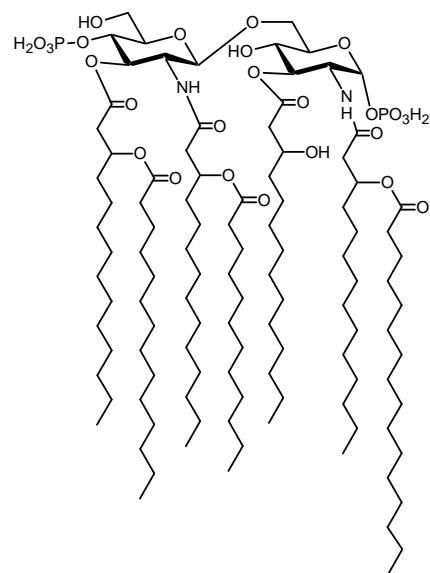
Applying most advanced synthetic technology, Salmonella-type Lipid A is now available from PEPTIDE INSTITUTE, INC.



Lipid A (*E. coli*)  
 [Compound 506, LA-15-PP]



Lipid IVa  
 [Compound 406, LA-14-PP, Precursor Ia]



**New** Lipid A (*Salmonella*)

Code	Compound	Quantity	Price: Yen
24005-s	Lipid A ( <i>E. coli</i> )	0.1 mg vial	20,000
24006-s	Lipid IVa	0.1 mg vial	20,000
24008-s	Lipid A ( <i>Salmonella</i> )	0.1 mg vial	20,000