![HiPep Laboratories logo]

# Structured Peptide Library

## Overview

Since HiPep Laboratories founding in 2002, we provide structured peptide libraries constructed as capture molecules equipped with biochips. These peptide libraries have the potential to inhibit protein-protein interactions and change protein function. Number of possible design peptides: *de novo* designed peptides ca. 500 species of α-helix, ca. 400 species of β-sheet, ca. 500 species of β-loop, ca. 100 glycopeptides; N-terminal TAMRA, C-terminal Cys, glycopeptide only Cys (Acm)
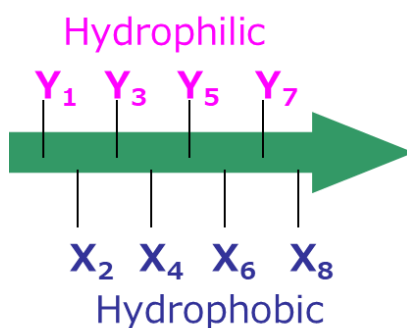
1. High-purity peptides are pipetted into vials or tita-plates
2. Hit peptides patents can also be monopolized by customers
3. Structural optimization consulting based on hit sequence
4. Synthesis of peptide libraries of optimized structures on a commission basis

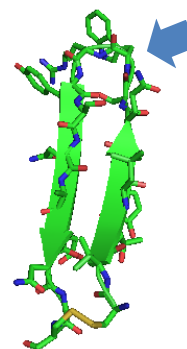### Application: protein-protein interaction (PPI) inhibitor screening etc.
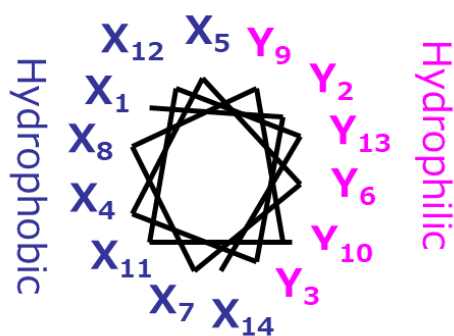
| α-Helical library | β-Strand library | β-Loop library |
|---|---|---|



**TAMRA-G-$X_1$-$Y_2$-$Y_3$-$X_4$-$X_5$-$Y_6$-$X_7$-$X_8$-$Y_9$-$Y_{10}$-$X_{11}$-$X_{12}$-$Y_{13}$-$X_{14}$-GC-NH$_2$**

**CG-$X_1$-$Y_2$-$X_3$-$Y_4$-$X_5$-$Y_6$-$X_7$-$Y_8$-K(α-TAMRA)G-NH$_2$**

**TAMRA-KKITV-$X_1$-$X_2$-$X_3$-$X_4$-KTYTEGC-NH$_2$**

| Glycopeptide library | → For Drug Discovery |
|---|---|

α-Helix peptide hydrophilic residue:
Loop partial residue of β-Loop peptide:
Hydrophilic residue of β-Strand peptide:
→ Replaced by Thr (O-Suger)



Fluorescent label: ★
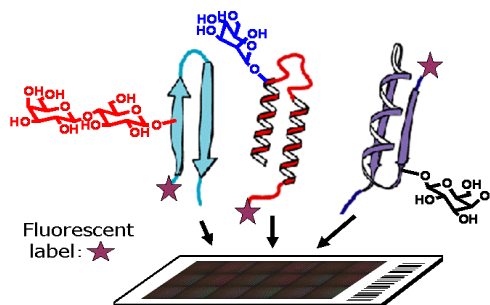
### *Please inquire details*

Tominaga, Y., Hirata, A., and Nokihara, K., Bioorg. Med. Chem. Lett. 25, 611-615, **2015**.
Recognition of a monoclonal antibody against a small molecular weight antigen by monitoring the antigen–antibody reaction using fluorescence labeled structured peptides

Kawasaki, T., Ohyama, T., Hirata, A. and Nokihara, K., Bull. Chem. Soc. Jpn., **83**, 799-801, **2010**.
Fingerprint-detection of Sugar-Binding Proteins Generated by Labelled Structured Glycopeptides Arrays