

User Guide of Protein Labeling Kit (Chromo™ P503) (Cat. No.C104600)

Notes before starting:

- The properties of the proteins including pI and structure could affect the labeling efficiency.
- Protein labeling Dye is NOT included in the labeling kit.

Order information of the Protein labeling Dye:

Product Description	Manufactory / Cat. No.	Storage condition
Chromo™ P503 (1mg)	Sigma-Aldrich: 30693	-20°C(Avoid the light)

** Protein labeling dye need to be dissolved in proper solvents as below.

Dimethylsulfoxide (DMSO), Dimethylformamide(DMF), Acetonitrile or Methanol (**Recommend: DMSO**)

Contents:

Packing List: (200 Reactions)

Cat. No.	Description	Size	Storage condition
C104601	5X Labeling Buffer	8ml	4°C
C104602	Denaturant	500µl	Room Temperature
C104605	Protein Alignment Marker	100µl X 2	Room Temperature

Instruction of Protein Labeling process:

Preparation of reagents :

1X Labeling Buffer: Use 1:4(v/v) ratio to dilute **5X Labeling Buffer** by Deionized water.

Dye Stock Solution: To dissolve the **Protein labeling Dye** by 1ml DMSO(**1mg/ml**)and cover by the aluminum foil to avoid the light (Store at -20°C)

Dye Working Solution: Use 1:4(v/v) ratio to dilute the **Dye Stock Solution** by DMSO, before labeling (**0.2 mg/ml**)

Sample preparation: Dissolve the protein sample into **1X Labeling Buffer**.

(Before labeling, the concentration of protein is **2mg/ml**) and follow the instruction below.

Protein Labeling :

Add the reagents as following into the new tubes.

(200µl tube)

Reagents	Volume (µl)
1X Labeling Buffer	12
Protein Sample (2mg/ml)	5
Denaturant (C104602)	2
Dye Working Solution	1
Total Volume	20

Protein Labeling steps:

1. Add 12µl **Labeling Buffer (1X)** into new 200µl tube
2. Add 5µl **Protein sample** and gently mixing
3. Add 2µl **Denaturant (C104602)** and mix well
4. Add 1µl **Dye Working Solution** and gently mixing
5. Labeling the protein samples at **60°C** for **10 minutes**
(cover by the aluminum foil to avoid the light)
6. Cooling down the samples to room temperature.
7. Store protein sample at -20°C (Avoid the light)

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Labeled Protein Treatment :

- Using **Protein Dilution Buffer (C104505)** to dilute labeled protein sample to proper concentration
 (Recommend: Dilute protein sample 20 ~ 50times)
***Protein Dilution Buffer (C104505) is included in the Protein Cartridge Kit**
- Before analyzing**, the protein sample needs to heat at **100°C for 5 minutes**. After sample cooling down to room temperature, follow the instruction to analyze the protein samples.

Separation Buffer Preparation:

Separation buffer (1X): **5X Protein Separation buffer (C104501-5X)**, d2H₂O as diluent.



Add 1X Separation Buffer into 4 wells of Buffer Tray.

*Buffer height should be equal to the groove of wells.

***5X Protein Separation buffer (C104501-5X) is included in the Protein Cartridge Kit**

Sample Analysis:

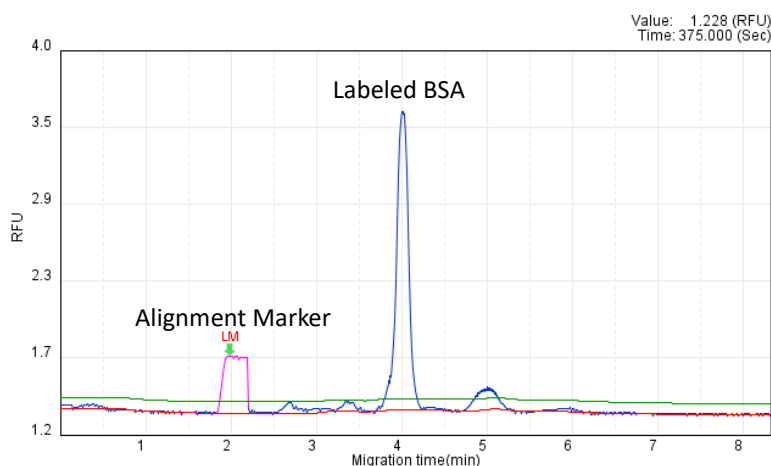
- Place the **Protein Alignment Marker (C104605)** at MD1 position.
- Place the sample into instrument.
- Use the following method to do analysis.

Alignment Marker MD-1

SN	Sample Position	Method	Sample Duration
1	A-01	P-4-10-04-1200	10

Method	Description
P-4-10-04-1200	Sample Injection 4kv 10s Separation 4kv 1200s

Recommended sample duration: 1~5s



- Labeled Protein should be analyzed by the Protein Cartridge kits(C105121/C105221/C105821) (100 Runs/Cartridge)