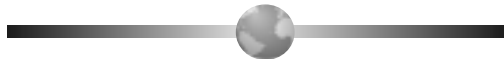


Ordering Information

Catalog

Catalog Number	Product Description
148-2015	CE-SDS Protein Size Standards , 14.4–200 kDa
148-4160	CE-SDS Protein Kit
148-5032	CE-SDS Protein Run Buffer
148-5033	CE-SDS Protein Sample Buffer
148-2016	CE-SDS Internal Reference



CE-SDS Protein Size Standards

14–200 kDa

**Catalog Number
148-2015**

Product shipped at room temperature.

Store at -20 °C upon arrival.

See instructions for use.

For laboratory use only.

CAS 56-381-5 (glycerol)



The CE-SDS Protein Size Standards are designed for use with the Bio-Rad CE-SDS Protein Kit (catalog number 148-4160) and the BioFocus® automated capillary electrophoresis systems. This standard can be used to assess the performance of the capillary electrophoresis reagents and instrument, and to generate a calibration plot for use in estimation of protein molecular weight.

Specifications

Contents:	Approximately 4 mg total protein in 50 % glycerol, 100 mM DTT, and 3 mM NaN ₃
Volume:	200 µl concentrated solution
Storage:	-20 °C
Shelf life:	1 year at -20 °C
Applications per vial:	20

Protein Molecular Weights (Daltons)

Lysozyme	14,400
Trypsin inhibitor	21,500
Carbonic anhydrase	31,000
Ovalbumin	45,000
Serum albumin	66,200
Phosphorylase B	97,000
β-galactosidase	116,000
Myosin	200,000

Instructions For Use

Combine 10 µl of the CE-SDS Protein Size Standards solution, 100 µl of CE-SDS Protein Sample Buffer (catalog number 148-5033; this buffer contains 1% SDS in 100 mM Tris HCl, pH 9.2) and 10 µl of CE-SDS Internal Reference (1 mg/ml benzoic acid, catalog number 148-2016). Add 80 µl deionized water to bring total volume to 200 µl. Hold the mixture in a capped 500 µl

microcentrifuge vial in a 95 - 100 °C water bath for 10 minutes. Cool the mixture, centrifuge for 2 min in a microcentrifuge, then hold at room temperature prior to analysis. This prepared standard solution can be stored at -20 °C for at least 1 week.

IMPORTANT: Use of a contact heater block to prepare the standard may result in insufficient SDS binding and poor separation profiles. Use of a heated water bath is strongly recommended.

Peaks

- 1 Benzoic acid (Reference Standard)
- 2 Lysozyme (14,400 Da)
- 3 Trypsin inhibitor (21,500 Da)
- 4 Carbonic anhydrase (31,000 Da)
- 5 Ovalbumin (45,000 Da)
- 6 Serum albumin (66,200 Da)
- 7 Phosphorylase B (97,000 Da)
- 8 β -Galactosidase (116,000 Da)
- 9 Myosin (200,000 Da)

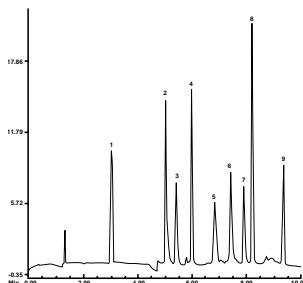


Fig. 1. Separation of the CE-SDS Protein Size Standards by dynamic sieving capillary electrophoresis with the CE-SDS Protein Kit using the BioFocus automated capillary electrophoresis system. Separation conditions: capillary, 24 cm x 50 μ m, uncoated; polarity, negative to positive; injection, 10 kV for 5 sec; run buffer, CE-SDS Protein Run Buffer; voltage, 15 kV; detection, 220 nm; capillary temperature, 20 °C.

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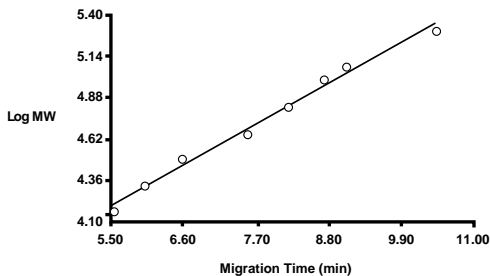


Fig. 2. Molecular weight calibration plot generated from migration time data obtained from the separation shown in Fig. 1.

Protein References

Protein	Reference
Rabbit skeletal muscle myosin	Woods, E. F., Himmelfarb, S. and Harrington, W. F., <i>J. Biol. Chem.</i> , 238 , 2374 (1963).
<i>E. coli</i> β-galactosidase	Fowler, A. V. and Zabin, I., <i>Proc. Natl. Acad. Sci. USA</i> , 74 , 1507 (1977).
Rabbit muscle phosphorylase b	Titani, K., et al., <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 74 , 4762 (1977).
Bovine serum albumin (BSA)	Brown, J. R., <i>Fed. Proc.</i> , 34 , 591 (1975).
Hen egg white ovalbumin	Warner, R. C., "Egg Proteins," in: The Proteins , Vol. IIA, p. 435 (Neurath, H. and Bailey, K., eds.), Academic Press, New York (1954).
Bovine carbonic anhydrase	Davis, R. P., "Carbonic Anhydrase," in: The Enzymes , Vol V, p. 545. (Boyer, P. D., ed.) Academic Press, New York (1971)
Soybean trypsin inhibitor	Wu, Y. V. and Scheraga, H. A., <i>Biochemistry</i> , 1 , 698 (1962).
Hen egg white lysozyme	Jolles, P., <i>Angew. Chem. Intl. Edit.</i> , 8 , 227 (1969).