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CandyCane™ Glycoprotein Molecular Weight Standards (C21852)

Quick Facts

Storage upon receipt:
- –20°C (long term)
- 4°C (short term)

Concentration: Each protein ~0.5 µg/µL

Introduction

CandyCane™ glycoprotein molecular weight standards contain a mixture of glycosylated and non-glycosylated proteins ranging from 14,000 to 180,000 molecular weight. When separated by polyacrylamide gel electrophoresis, the standards appear as alternating bands corresponding to glycosylated and nonglycosylated proteins (Figure 1). Thus, these standards serve both as molecular weight markers and as positive and negative controls for methods that detect glycoslyated proteins, such as the methods provided in our Pro-Q® Glycoprotein Stain Kits (see *Product List*, below).

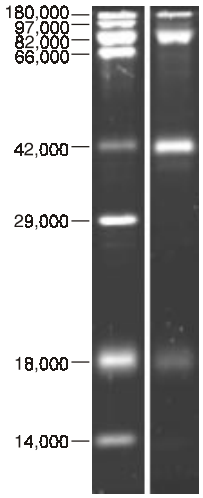

Figure 1. *Glycosylated and nonglycosylated proteins in the CandyCane glycoprotein molecular weight standards. The standards were electrophoresed through two identical 13% polyacrylamide gels. Both lanes contain ~0.5 µg of protein in each band. The left lane is stained with SYPRO® Ruby protein gel stain to detect all eight marker proteins. The right lane is stained using Pro-Q Emerald 300 glycoprotein detection reagent. The protein molecular weights are indicated, and the identities of the proteins can be found in Table 1.*

Table 1. *Characteristics of proteins included in the CandyCane glycoprotein molecular weight standards.*

Protein	Molecular Weight	Glycoprotein?	Con A	WGA	GS-II
α_2-Macroglobulin[1]	180,000	yes *	+	+	–
Phosphorylase b[2]	97,000	no	–	–	–
Glucose oxidase[3]	82,000	yes	+	+	+
Bovine serum albumin[4]	66,000	no †	(+)	(+)	–
α_1-Acid glycoprotein[4]	42,000	yes	(+)	+	–
Carbonic anhydrase[5]	29,000	no	–	–	(+)
Avidin[6]	18,000	yes *	+	+	–
Lysozyme[6]	14,000	no	–	–	–

Con A = concanavalin A; **WGA** = wheat germ agglutinin; **GS-II** = *Griffonia simplicifolia* lectin II. Staining with the indicated lectins is indicated by either **+** strong signal, **(+)** weak signal, or **–** no signal. **1.** from human plasma; **2.** from rabbit muscle; **3.** from *Aspergillis niger*; **4.** from bovine serum; **5.** from bovine erythrocyte; **6.** from chicken egg. ***** These glycoproteins may not transfer efficiently to nitrocellulose or poly(vinylidene fluoride) (PVDF) membranes. **†** A comigrating glycoprotein contaminant may be visible with wheat germ agglutinin– and concanavalin A–detection strategies.

Materials

Contents

The CandyCane glycoprotein molecular weight standards are sold in a unit size of 400 µL, sufficient volume for approximately 200 gel lanes. Each protein is present at ~0.5 µg/µL. The proteins are provided in a storage solution that contains 10 mM Tris, pH 7.5, 200 mM NaCl, 15 mM dithiothreitol, 2 mM EDTA, 3 mM sodium azide and 35% glycerol. Characteristics of the proteins and staining patterns with various lectins are listed in Table 1.

Storage

For long-term storage, the standards should be kept at -20°C to prevent microbial contamination.

Application

For 8 cm × 10 cm gels, mix 0.5 µL of the protein standard with 7.5 µL of SDS gel-loading buffer, heat at 95°C for 4 minutes and pipet into the well reserved for the standard. This will result in ~250 ng of each protein per lane. For larger gels, increase the amount of standards. Figure 1 shows the standards and their molecular weights.

Product List *Current prices may be obtained from our Web site or from our Customer Service Department.*

Cat #	Product Name	Unit Size
C21852	CandyCane™ glycoprotein molecular weight standards *200 gel lanes*	400 µL
P21855	Pro-Q® Emerald 300 Glycoprotein Gel Stain Kit *with SYPRO® Ruby protein gel stain* *10 minigels*	1 kit
P21857	Pro-Q® Emerald 300 Glycoprotein Gel and Blot Stain Kit *10 minigels or mingel blots*	1 kit
P21875	Pro-Q® Emerald 488 Glycoprotein Gel and Blot Stain Kit *10 minigels or minigel blots*	1 kit
P21872	Pro-Q® Glycoprotein Blot Stain Kit #5 *with *Griffonia simplicifolia* lectin II (GS-II) and DDAO phosphate* *>20 minigel blots*	1 kit

Contact Information

Further information on Molecular Probes products, including product bibliographies, is available from your local distributor or directly from Molecular Probes. Customers in Europe, Africa and the Middle East should contact our office in Leiden, the Netherlands. All others should contact our Technical Assistance Department in Eugene, Oregon.

Please visit our Web site — **www.probes.com** — for the most up-to-date information

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