Data Sheet

Protein Molecular Weight Standards Cat. No. 39064

The Kit contains 8 standard proteins of high purity, which are selected particularly for application in **native protein electrophoresis**. The corresponding molecular weights of the proteins in their **native** and **denatured form** are shown in the table below.

Each of the 8 standard proteins are individually packed in 25 mg sizes and are provided either as lyophilised powder, as aqueous suspension (Aldolase) or as a solution (Ferritin) (see table below).

- **Performing native electrophoresis:**

According to the application, single proteins or an individual mixture of the standard marker proteins may be applied which have to be resolved respectively suspended/diluted in appropriate sample buffer prior to use. The composition of the according sample buffer depends also on the pI of the protein(s). To avoid unwanted precipitation of proteins the pI values (resp. ranges) are shown in the table below. Adjust the final concentration (dilution) of the marker proteins according to the applied sample volume and the sensitivity of the subsequent staining procedure. We recommend approx. 1 mg/ml if Coomassie staining is employed and approx. 0.1 mg/ml for silver staining.

- **Use in other electrophoresis applications:**

The suitability of the standard marker proteins in SDS-PAGE, isoelectric focusing or 2D- electrophoresis is mainly determined by the electrophoretic and physical properties (see table below) and should be evaluated for each experiment individually.
Under **denaturing conditions** (e.g. SDS) please note that the larger proteins (Aldolase, Catalase, Ferritin) will dissociate into smaller **subunits** (number of subunits that will appear are given in the table below).

Protein	Origin	MW [Da] native	MW [Da] denat.	No. of subunits	pI	Phys. form
Cytochrome C	porcine heart	**12 300**	12 300	1	10.7	lyophil.
Myoglobin equine	horse muscle	**17 800**	17 800	1	6.9 / 7.4	lyophil.
Chymotrypsinogen A	bovine pancreas	**25 000**	25 000	1	9.2 -9.6	lyophil.
Albumin egg	chicken	**45 000**	45 000	1	4.5 -4.7	lyophil.
Albumin bovine	bovine serum	**67 000**	67 000	1	4.7 -4.9	lyophil.
Aldolase	rabbit muscle	**160 000**	40 000	4	8.2 -9.1	suspension [1)]
Catalase	bovine liver	**240 000**	60 000	4	5.5 -6.0	lyophil.
Ferritin	horse spleen	**450 000**	ca. 18 500	24	4.1 -5.1	solution [2)]

[1)] Suspension in 3.2 M ammoniumsulfate (protein concentration please see label).
[2)] Solution in 0.15 M NaCl (protein concentration please see label).

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