

# Protein 230

## Physical Specifications

Type	Specification
Analysis run time	25 minutes
Number of samples	10 samples/chip
Sample volume	4 $\mu$ l
Kit stability	4 months (Storage Temperature see individual box)

CAII = Carbonic Anhydrase  
BSA = Bovine Serum Albumin

## Analytical Specifications

Type	Agilent Protein 230 Assay
Sizing range	14-230 kDa
Typical sizing resolution	10%
Typical sizing accuracy	10% CV (BSA, CAII)
Sizing reproducibility	3% CV (BSA, CAII)
Sensitivity (Signal/Noise>3)	6 ng/ $\mu$ l CAII (15 ng/ $\mu$ l BSA) in PBS 30 ng/ $\mu$ l (BSA) in 0.5 M NaCl
Quantitative range	15-2000 ng/ $\mu$ l CAII, 30-2000 ng/ $\mu$ l BSA in PBS
Qualitative range	6-5000 ng/ $\mu$ l CAII, 15-5000 ng/ $\mu$ l BSA in PBS
Quantitation reproducibility	20% CV (BSA, CAII)
Compatible buffers	see <i>List of Compatible Buffers and Buffer Compounds</i> in your Protein 230 Kit Guide

# Protein 230 – known compatible buffers

## Salts and Buffers (Composition Measured before Sample Preparation)

50 mM Tris / 500 mM NaCl / 500 mM imidazole pH 7.5  
 20 mM Tris / 500 mM NaCl / 200 mM imidazole pH 7.9  
 500 mM imidazole in PBS pH 7.4  
 20 mM Tris / 500 mM NaCl / 200 g/ml FLAG peptide pH 7.5  
 50 mM Tris / 10 mM glutathione pH 8.0  
 20 mM Tris / 100 mM NaCl / 30 mM reduced glutathion pH 7.4  
 6 M urea / 50 mM NaH<sub>2</sub>PO<sub>4</sub> / 100 mM NaCl / 30 mM acetic acid / 70 mM NaAc pH 5  
 10 mM MES / 500 mM NaAc pH 7.0  
 10 mM MES / 500 mM NH<sub>4</sub>SO<sub>4</sub> / 10 mM NaAc pH 5.6  
 200 mM KCl, 40 mM MgCl<sub>2</sub>, 20 mM HEPES, pH 7.2  
 2M Urea, 15 % glycerol, 100 mM DTT, 100 mM Tris/HCl, pH 8.8  
 50 mM MgCl<sub>2</sub> in PBS  
 6 M urea in PBS  
 25 mM HEPES / 150 mM NaCl pH 7.5  
 20 mM NaAc  
 50 mM NaAc in PBS  
 25 mM NaF  
 200 mM NH<sub>4</sub>SO<sub>4</sub>  
 25 mM PIPES pH 7.0  
 100 mM Tris/150 mM sodium citrate pH 7.5  
 1 M NaCl (it might happen that the upper marker decreases)  
 PBS pH 7.4  
 10 mM HCl  
 10 mM NaOH  
 10 mM EDTA  
 2.5 % mannitol  
 50 mM MOPS

## Detergents

0.5 % CHAPS in PBS pH 7.4  
 0.25 % Triton X-100 in PBS pH 7.4  
 0.5 % Tween 20 in PBS pH 7.4  
 0.25 % zwittergent E3-14 in PBS pH 7.4  
 0.05 % desoxycholate in PBS pH 7.4  
 0.5 % sarcosyl in PBS pH 7.4

## Possible Effects

large system peak, baseline hump or wave following system peak, reproducibility of quantitation might be affected, slightly affects sizing  
 large system peak, baseline hump following system peak, reproducibility of quantitation might be affected, slightly affects sizing  
 large system peak, reproducibility of quantitation might be affected  
 large system peak

## Other additives

40 % acetonitrile 0.1 % TFA  
 10 % DMSO  
 30 % glycerol  
 50 mM guanidine  
 300 mM NH<sub>4</sub>HCO<sub>3</sub>  
 20 % methanol  
 1 % PEG 2000 (polyethylene glycol)

## Possible Effects

precipitates SDS, upper marker decreased, quantitation might be affected  
 compatible at low concentrations, at higher concentrations than 50 mM guanidine precipitates SDS and quantitation is affected  
 quantitation might be affected, slightly affects sizing  
 precipitates SDS, upper marker decreased, quantitation might be affected  
 leads to three baseline artifacts of 25, 45, and 58 kDa size, reproducibility of quantitation might be affected

# Protein 80

## Physical Specifications

Type	Specification
Analysis run time	30 minutes
Number of samples	10 samples/chip
Sample volume	4 µl
Kit stability	4 months (Storage Temperature see individual box)

CAII	= Carbonic Anhydrase
BSA	= Bovine Serum Albumin
BLG	= beta-Lactoglobulin

## Analytical Specifications

Type	Agilent Protein 80 Assay
Sizing range	5-80 kDa
Typical sizing resolution	10%
Typical sizing accuracy	10% CV (CAII, BLG)
Sizing reproducibility	3% CV (CAII, BLG)
Sensitivity (Signal/Noise>3)	6 ng/µl CAII (15 ng/µl BSA) in PBS, 10 ng/µl (CAII) in 0.5 M NaCl (30ng/µl BSA in 0.5 M NaCl)
Quantitative range	60-2000 ng/µl CAII in PBS
Qualitative range	6-4000 ng/µl CAII and BLG
Quantitation reproducibility	20% CV (CAII, BLG)
Compatible buffers	see <i>List of Compatible Buffers and Buffer Compounds</i> in your Protein 80 Kit Guide

# Protein 80- known compatible buffers

## Salts and Buffers (Composition Measured before Sample Preparation)

50 mM Tris / 500 mM NaCl / 500 mM imidazole pH 7.5  
 250 mM imidazole in PBS pH 7.4  
 50 mM Tris / 10 mM glutathione pH 8.0  
 20 mM Tris / 100 mM NaCl / 30 mM reduced glutathion pH 7.4  
 50 mM MgCl<sub>2</sub> in PBS  
 6 M urea in PBS  
 25 mM HEPES / 150 mM NaCl pH 7.5  
 20 mM NaAc  
 25 mM NaF  
 200 mM (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>  
 25 mM PIPES pH 7.0  
 100 mM Tris/150 mM sodium citrate pH 7.5  
 1 M NaCl (it might happen that the upper marker decreases)  
 PBS pH 7.4  
 10 mM HCl  
 10 mM NaOH  
 10 mM EDTA

## Detergents

Detergents	Possible Effects
1 % Triton X-100 in PBS pH 7.4	broad system peak, decreases sizing range for smaller proteins, reproducibility of quantitation might be affected, effect is less pronounced when a protein is present
0.25 % Tween 20 in PBS pH 7.4	broad system peak, decreases sizing range for smaller proteins, reproducibility of quantitation might be affected
0.375 % zwittergent E3-14 in PBS pH 7.4	large system peak, impairs sizing range
0.5 % sarcosyl in PBS pH 7.4	baseline artefact, slight hump appears around 15 kDa, less problematic if a protein is added

## Other additives

Other additives	Possible Effects
40 % acetonitril + 0.05 % formic acid	precipitates SDS, upper marker decreased, quantitation might be affected, maybe more spike in the baseline
1 % SDS	more diverse system peak, dip after system peak might be larger
10 % DMSO	no observations
30 % glycerol in PBS	no observations
50 mM guanidine	compatible at low concentrations, at higher concentrations than 50 mM guanidine precipitates SDS and quantitation is affected
20 % methanol + 0.25 % formic acid	precipitates SDS, upper marker decreased, quantitation might be affected
1 % PEG 2000 (polyethylene glycol)	leads to three baseline artefacts of approximately 25, 45, and 58 kDa size, reproducibility of quantitation might be affected