

## Compatibility Table for BCA Protein Assay Kit

The values listed below indicate the maximum permissible concentrations or amounts of substances in the sample that do not cause significant interference under the standard BCA assay conditions (20  $\mu$ L protein sample).

### 1. Buffer System

Substance	Compatible Concentration
N-Acetylglucosamine (10 mM) in PBS, pH 7.2	10 mM
ACES, pH 7.8	25 mM
Bicine, pH 8.4	20 mM
Bis-Tris, pH 6.5	33 mM
Cell-Lytic B Reagent	Undiluted, no interference
Calcium chloride in TBS, pH 7.2	10 mM
CHES, pH 9.0	100 mM
Cobalt chloride in TBS, pH 7.2	0.8 M
EPPS, pH 8.0	100 mM
Ferric chloride in TBS, pH 7.2	10 mM
HEPES	100 mM
MOPS, pH 7.2	100 mM
Nickel chloride in TBS	10 mM
PBS; Phosphate (0.1 M), NaCl (0.15 M), pH 7.2	Undiluted, no interference
PIPES, pH 6.8	100 mM
Sodium acetate, pH 4.8	200 mM
Sodium citrate, pH 4.8 or pH 6.4	200 mM
Tricine, pH 8.0	25 mM
Triethanolamine, pH 7.8	25 mM
Tris	250 mM
TBS; Tris (25 mM), NaCl (0.15 M), pH 7.6	Undiluted, no interference
Tris (25 mM), Glycine (1.92 M), SDS (0.1%), pH 8.3	Undiluted, no interference
Zinc chloride (10 mM) in TBS, pH 7.2	10 mM

### 2. Buffer Additive

Substance	Compatible Concentration
Ammonium sulfate	1.5 mM

Aprotinin	10 mg/L
Cesium bicarbonate	100 mM
Glucose	10 mM
Glycerol	10%
Guanidine-HCl	4 M
Hydrochloric acid	100 mM
Imidazole	50 mM
Leupeptin	10 mg/L
PMSF	1 mM
Sodium azide	0.20%
Sodium bicarbonate	100 mM
Sodium chloride	1 M
Sodium hydroxide	100 mM
Sodium phosphate	25 mM
Sucrose	40%
TLCK	0.1 mg/L
TPCK	0.1 mg/L
Sodium ortho-Vanadate in PBS, pH 7.2	1 mM
Thimerosal	0.01%
Urea	3 M

### 3. Chelating agent

Substance	Compatible Concentration
EDTA	10 mM
EGTA	Not compatible
Sodium citrate	200 mM

### 4. Detergent

Substance	Compatible Concentration
Brij-35	5%
Brij-52	1%
CHAPS	5%
CHAPSO	5%
Deoxycholic acid	5%
Nonidet P-40 (Igepal CA-630)	5%
Octyl $\beta$ -glucoside	5%

Octyl $\beta$ -thioglucopyranoside	5%
SDS	5%
Span 20	1%
Triton X-100	5%
Triton X-114	1%
Triton X-305	1%
Triton X-405	1%
Tween 20	5%
Tween 60	5%
Tween 80	5%
X-Dodecyl	1%
Zwittergens	1%

#### 5. Reducing & Thiol Containing Agent

Substance	Compatible Concentration
Dithioerythritol (DTE)	1 mM
Dithiothreitol (DTT)	1 mM
2-Mercaptoethanol	1 mM
Tributyl Phosphine	0.01%

#### 6. Solvent

Substance	Compatible Concentration
Acetone	10%
Acetonitrile	10%
DMF	10%
DMSO	10%
Ethanol	10%
Methanol	10%

#### Notes

- This is not a complete compatibility list. In practice, it is recommended to dissolve the protein of interest separately in deionized water and in the buffer containing the potential interfering substance(s) and then compare the readings to determine whether interference exists.
- The main interfering substances in the BCA assay include: chelating agents (EDTA > 10 mM, EGTA at any concentration), thiol-containing reducing agents (cysteine at

any concentration, DTT > 1 mM, DTE > 1 mM,  $\beta$ -mercaptoethanol > 0.01%), and high concentrations of salts or buffers (ammonium sulfate > 1.5 M, Tris > 0.25 M, sodium phosphate > 0.1 M).

