

Compatibility Chart For BCA Kit

The amount listed is the maximum amount of material allowed in the protein sample without causing a noticeable interference, when 20 ul protein sample is used for BCA assay as described in the standard assay.

Incompatible Substances / Amount Compatible

Buffer Systems

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
CellLytic 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

Buffer Additives

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

Chelating agents

EDTA 10 mM
EGTA not compatible
Sodium citrate 200 mM

Detergents

Brij-35 5%
Brij-52 1%
CHAPS 5%
CHAPSO 5%
Deoxycholic acid 5%
Nonidet P-40 (Igepal CA-630) 5%
Octyl β -glucoside 5%
Octyl β -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%
Zwittergents 1%

Reducing & Thiol Containing Agents

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

Solvents

Acetone 10%
Acetonitrile 10%
DMF 10%
DMSO 10%
Ethanol 10%
Methanol 10%

Note: This is not a complete compatibility chart. There are many substances that can affect different proteins in different ways. One may assay the protein of interest in deionized water alone, then in the buffer with possible interfering substances. Comparison of the readings will indicate if an interference exists.

Note: Reagents that chelate metal ions, change the pH of the assay, or reduce copper will interfere with the BCA assay. Examples are shown below:

1. Metal chelators such as EDTA (> 10 mM) and EGTA (any level).
2. Thiol containing reagents such as cysteine (any level), DTT (> 1 mM), dithioerythritol(> 1 mM), and 2-mercaptoethanol (> 0.01%).
3. High salt or buffers concentrations such as ammonium sulfate (> 1.5 M), Tris (>0.25 M), and sodium phosphate (> 0.1 M).