

## Protease inhibitors

Inhibitor	Protease target	Effective concentrations	Stock solution	Comments
Antipain	papain and trypsin	50 µg/ml	1 mg/ml in H <sub>2</sub> O	chymotrypsin, pepsin, plasmin unaffected
APMSF	trypsin-like serine proteases	10–40 µg/ml or 10–20 µM	100 mM in H <sub>2</sub> O	less toxic than PMSF; does not inhibit chymotrypsin or acetylcholinesterases
Aprotonin	serine proteases	0.06–2 µg/ml	10 mg/ml in PBS	avoid repeated refreezing
Bestatin	amino peptidases	40 µg/ml	make in methanol <sup>a</sup>	does not inhibit carboxypeptidases
Calpain Inhibitors I and II	calpain (calcium-dependent cysteine proteases)	I: 17 µg/ml II: 7 µg/ml	make in ethanol <sup>a</sup>	membrane permeable
Chymostatin	chymotrypsin	6–60 µg/ml	make in DMSO <sup>a</sup>	
Complete Tablets (Boehringer Mannheim)	serine, cysteine, and metalloproteases	1 tablet per 10–50 ml cell extract		contain no EDTA
EDTA	metalloproteases	0.2–0.5 mg/ml or 0.5–1.3 µM	500 mM in H <sub>2</sub> O (pH 8.0)	
Leupeptin	serine and thiol proteases	0.5–2 µg/ml	10 mg/ml in H <sub>2</sub> O	
α <sub>2</sub> -Macroglobulin	broad spectrum	1 unit/ml	100 units/ml in PBS	avoid reducing agents
Pefabloc SC (Boehringer Mannheim)	serine proteases	0.1–1.0 mg/ml or 0.4–4 mM	100 mM in H <sub>2</sub> O	nontoxic, more stable at neutral pH than
PMSF				
Pepstatin	acid proteases	0.7 µg/ml	1 mg/ml in methanol	
PMSF	serine proteases	17–170 µg/ml	10 mg/ml in isopropanol	add fresh at each step
TLCK	trypsin	37–50 µg/ml	1 mg/ml in 50 mM acetate (pH 5.0)	chymotrypsin unaffected
TPCK	chymotrypsin	70–100 µg/ml	3 mg/ml in ethanol	trypsin unaffected

Most of the information in this table is derived from Boehringer Mannheim (1998) and Calbiochem (1997).

Reprinted, with permission, from Harlow and Lane (1999).

<sup>a</sup>DMSO, ethanol, methanol, see Appendix 4 for caution.