

Protease Inhibitors

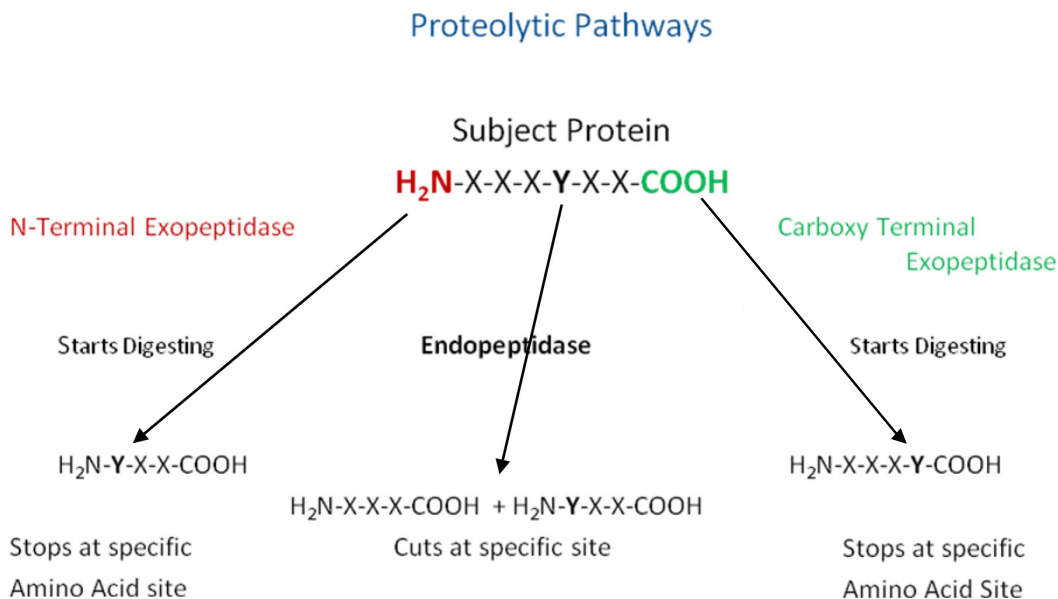
Proteases are ubiquitous enzymes which direct their action upon proteins, cleaving those proteins into smaller fragments consisting of polypeptides, peptides and amino acids. There are many proteases active against many proteins, and some are very specific while others cleave many different proteins.

In general proteases are classified into two main subclasses: endopeptidases and exopeptidases, dependent upon how and where the protease cleaves the protein. Endopeptidases attack proteins internally, typically at a specific amino acid site, and they cleave the protein into smaller fragments as they digest it. Exopeptidases, as their name suggests, begin digesting their target protein at the ends of the protein chain.

There are two main classes of exopeptidases, depending upon which functional group of the amino acid they attack, the N-terminus or the carboxy terminus. In both cases, the proteases begin digesting the protein and proceed along the amino acid backbone until they encounter a specific amino acid that signals the protease to stop.

The presence of undesired proteases during isolation and purification of intact proteins and peptides usually corresponds to greatly reduced yields and denatured proteins. The need for effective protease inhibition is therefore essential in sensitive protein research.

Alfa Aesar is pleased to present a versatile range of protease inhibitors and protease inhibitor cocktails for sensitive applications in protein research.



Protease Inhibitors

Item	Description	Application	Sizes
H26473	AEBSF, [4-(2-Aminoethyl)-benzenesulfonyl fluoride HCl	Irreversible, covalent binding serine protease inhibitor. Belongs to the family of sulfonyl fluorides that block trypsin and chymotrypsin-like enzymes. Similar to PMSF, AEBSF offers much lower toxicity than PMSF, more solubility in water, higher inhibitory activity and better stability.	250mg, 1gm
J60011	Antipain	A natural protease inhibitor for trypsin, papain, cathepsins A & B	50mg
J63680	Antipain dihydrochloride	Inhibits trypsins, papain and cathepsins A & B	5mg
J63039	Aprotinin	Potent protease inhibitor. Inhibits serine proteases, plasmins, trypsin and Protein C, but not thrombins.	10mg, 25mg, 100mg
J61106	Bestatin hydrochloride	Inhibitor of aminopeptidase B and leucin aminopeptidase.	100mg, 250mg
J62933	E-64	Selective and irreversible inhibitor of thiol proteases, including cysteine proteases.	5mg, 25mg
J63090	K252c	Staurosporinone; Inhibits protein kinase C	1mg, 5mg
J61188	Leupeptin Hemisulfate	Reversible inhibitor of Cathepsin B, calpain, plasmin, papain and trypsin.	25mg, 100mg
J60237	Pepstatin A	Protease inhibitor that acts on pepsin, renin, cathepsin D and other acid proteases	5mg, 25mg
J63456	Phosphoramidon disodium salt	Inhibitor of thermolysin and collagenase	5mg
B22146	PMSF	α -Toluenesulfonyl fluoride; Phenylmethanesulfonyl fluoride. A powerful protease inhibitor	1g, 5g, 25g
J64401	Protease Inhibitor Cocktail, for general use	Liquid, Note: Contains AEBSF, Aprotinin, E-64, Bestatin, Leupeptin, and EDTA. 1 ml of 100X concentrate store at -20°C	1ml
J61473	Protease Inhibitor Cocktail, for mammalian cells	Liquid, Note: Contains AEBSF, Aprotinin, E-64, Bestatin and Leupeptin. 1 ml of 100X concentrate store at -20°C	1ml
J64401	Protease Inhibitor Cocktail I	Lyophilized solid, Note: Forms 100x solution when reconstituted in 1ml water. A 1x solution contains 500uM AEBSF.HCl, 150nM aprotinin, 1uM E-64, 0.5mM EDTA disodium salt, and 1uM leupeptin hemisulfate	1 Unit
J65358	Protease Inhibitor Cocktail I, Animal Free	Solid, Note: A 1x stock solution contains 500uM AEBSF.HCl, 150nM aprotinin, 1uM E-64, 0.5mM EDTA and 1uM leupeptin hemisulfate. Reconstitute each vial with 1ml water to obtain a 100X stock solution	1 Unit
J64963	Protease Inhibitor Cocktail II	Lyophilized solid, Note: Reconstitute each vial with 1ml DMSO and 4ml H ₂ O to obtain a 5ml stock solution containing 20 mM AEBSF.HCl, 1.7mM bestatin, 200uM E-64, 85mM EDTA, and 2mM pepstatin A. Application(s): Inhibits aspartic, cysteine, serine, and metalloproteases, as well as aminopeptidases. Recommended for use with bacterial cell extracts.	1 Unit

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Not for human consumption or treatment

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Item	Description	Application	Sizes
J64283	Protease Inhibitor Cocktail III	Liquid, Note: 1ml in DMSO. One unit contains 100mM AEBSF.HCl, 80µM aprotinin, 5mM bestatin, 1.5mM E-64, 2mM leupeptin hemisulfate, and 1mM pepstatin A. Application(s): For use with mammalian cell and tissue extracts.	1 Unit
J64156	Protease Inhibitor Cocktail III, Animal-Free	Liquid, Note: Each vial contains 100mM AEBSF.HCl, 80µM recombinant aprotinin, 5mM bestatin, 1.5mM E-64, 2mM leupeptin hemisulfate and 1mM pepstatin A. Application(s): For use with mammalian cell and tissue extracts	1 ml
J64112	Protease Inhibitor Cocktail III, Animal-Free, DMSO-Free	Lyophilized solid, Note: Will make a 1ml solution of 100mM AEBSF.HCl, 80µM recombinant aprotinin, 5mM bestatin, 1.5mM E-64, 2mM leupeptin hemisulfate and 1mM pepstatin A when reconstituted in water.	1 Unit
J65789	Protease Inhibitor Cocktail IV	Liquid, Note: One unit contains 100mM AEBSF.HCl, 1.5mM E-64, 2mM pepstatin A and 500mM 1,10-phenanthroline. 1ml in DMSO. Application(s): For use with fungal and yeast extracts.	1 Unit
J65412	Protease Inhibitor Cocktail V, EDTA-Free	Lyophilized solid, Note: A 1x stock solution contains 500µM AEBSF.HCl, 150nM aprotinin, 1µM E-64 and 1µM leupeptin hemisulfate.	1 Unit
J64920	Protease Inhibitor Cocktail V, EDTA-Free, Animal-Free	Lyophilized solid, Note: Makes 100x stock solution with 1ml of water. A 1X stock solution contains 500 µM AEBSF.HCl, 150nM aprotinin, 1µM E-64 and 1µM leupeptin hemisulfate. Application(s): For the inhibition of serine- and cysteine-proteases, but not metalloproteases. For applications that require animal-free reagents.	1 Unit
J65974	Protease Inhibitor Cocktail VI, General Use	Lyophilized solid, Note: Reconstitute with 100ml water. The reconstituted cocktail solution contains 2mM AEBSF.HCl, 1mM EDTA disodium salt, 130 µM bestatin, 1µM E-64, 1µM leupeptin hemisulfate and 0.3µM aprotinin.	1 Unit
J64576	Protease Inhibitor Cocktail VI, Plant Cells	Liquid, Note: 1ml solution in DMSO containing 200mM AEBSF.HCl, 10mM bestatin, 3mM E-64, 2mM leupeptin hemisulfate, 500mM o-phenanthroline and 2mM pepstatin A.	1ml
J64016	Protease Inhibitor Cocktail VII, for His Tag Sequences	Liquid, Note: 1ml in DMSO. Contains 100mM AEBSF.HCl, 5 mM bestatin, 1.5mM E-64, 2mM pepstatin A and 200µM phosphoramidon disodium salt.	1 Unit
J65553	Protease Inhibitor Cocktail VII, for His Tag Sequences, DMSO-Free	Lyophilized solid, Note: When reconstituted to 1ml, 1 unit makes a solution containing 100 mM AEBSF.HCl, 5mM bestatin, 1.5mM E-64, 2mM pepstatin A and 200µM phosphoramidon disodium salt	1 Unit
J65384	Protease Inhibitor Cocktail VIII	Liquid, Note: A 1ml DMSO solution containing 1.56mM ALLN, 500µM antipain and 1.5mM E-64. Application(s): Has selective specificity for the inhibition of cysteine proteases, including calpains, cathepsins and papain	1 Unit

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