

Product Data Sheet

Cat#	SP-52720-5
Description:	p5 Ligand for DnaK and and DnaJ (AA: Cys-Leu-Leu-Leu-Ser-Ala-Pro-Arg-Arg) (MW: 1028.29)
Size:	5 mg
Purity:	>95%
Store:	Desiccated at -20oC.

This nonapeptide corresponds to the main binding site for the 23-residue part of the pre sequence of mitochondrial aspartate aminotransferase. It is a high-affinity ligand for molecular chaperones, DnaK and DnaJ. They are a diverse family of proteins that function to protect proteins from irreversible aggregation during synthesis and in times of cellular stress.

DnaK is an enzyme that couples cycles of ATP binding, hydrolysis, and ADP release by an N-terminal ATP-hydrolyzing domain to cycles of sequestration and release of unfolded proteins by a C-terminal substrate binding domain. It is a weak ATPase; ATP hydrolysis by DnaK is stimulated by its interaction with another co-chaperone, DnaJ. The co-chaperones DnaJ and GrpE are capable of tightly regulating the nucleotide-bound and substrate-bound state of DnaK in ways that are necessary for the normal housekeeping functions and stress-related functions of the DnaK molecular chaperone cycle. The co-chaperone DnaJ (Hsp40) has been reported to bind native and denatured proteins as well as peptides.

The peptide (CLLLSAPRR), represents part of the presequence of mitochondrial aspartate aminotransferase, has previously been shown to bind to both DnaK and DnaJ

Reference: Feifel, B. et al.(1998) J. Biol. Chem. 273, 11999

Related items:

Catalog#	ProdDescription
RP-615	Recombinant E.Coli DnaK (HSP70)
RP-617	Recombinant (E.Coli) DnaK Substrate Binding Domain
RP-618	Recombinant (E.Coli) DnaK Substrate Binding Domain C-terminal
RP-619	Recombinant (E.Coli) DnaK ATPase Binding Domain
RP-620	Recombinant (E.Coli) DnaK Lid Covering Substrate
RP-628	Recombinant purified Mycobacterium Tuberculosis Heat Shock Protein 70 (hsp70/DnaK/ML2496)
SP-52720-5	p5 Ligand for DnaK and and DnaJ (AA: Cys-Leu-Leu-Leu-Ser-Ala-Pro-Arg-Arg) (MW: 1028.29)
RP-616	Recombinant (E.Coli) DnaJ

SP-52720-5	141208P
------------	---------