10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Hsp 60 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP6800a

Specification

Hsp 60 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q0VDF9

Hsp 60 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 51182

Other Names
Heat shock 70 kDa protein 14, HSP70-like protein 1, Heat shock protein HSP60, HSPA14, HSP60, HSP70L1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP6800a was selected from the N-term region of human Hsp 60. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Hsp 60 Antibody (N-term) Blocking Peptide - Protein Information

Name HSPA14

Synonyms HSP60, HSP70L1

Function
Component of the ribosome-associated complex (RAC), a complex involved in folding or maintaining nascent polypeptides in a folding- competent state. In the RAC complex, binds to the nascent polypeptide chain, while DNAJC2 stimulates its ATPase activity.

Cellular Location
Cytoplasm, cytosol.

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Hsp 60 Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

Hsp 60 Antibody (N-term) Blocking Peptide - Images

Hsp 60 Antibody (N-term) Blocking Peptide - Background

Hsp60 is a member of a highly conserved family which includes molecular chaperones from several species such as plant Hsp60 (known as Rubisco binding protein), GroEL, the E.coli Hsp60 and 65 kDa major antigen of mycobacteria. In eukaryotes, Hsp60 is localized in the mitochondrial matrix and in plants Hsp60 is localized in the chloroplast. Mitochondria, chloroplasts and bacteria have a common ancestry (>1 billion years) and this fact together with the high degree of homology between the divegent Hsp60s would indicate that these proteins carry out a primitive but important function which is similar to all of these different species.The common characteristics of the Hsp60s from the divergent species are i) high abundance, ii) induction with environmental stress such as heat shock, iii) homo oligomeric structures of either 7 or 14 subunits which reversibly dissociate in the presence of magnesium ions and ATP, iv) ATPase activity and v) a role in folding and assembly of oligomeric protein structures. These similarities are supported by recent studies where the single ring human mitochondrial homolog, Hsp60 with its co chaperonin, Hsp10 were expressed in a E. coli strain, engineered so that the groE operon is under strict regulatory control. This study has demonstrated that expression of Hsp60-Hsp10 was able to carry out all essential in vivo functions of GroEL and its co chaperonin, GroES. Consistent with their functions as chaperones, Hsp60 and Hsp10 have been suggested to act as docking molecules with a passive role in the maturation of caspase processing. Data demonstrates that recombinant Hsp60 and Hsp10 have been shown to accelerate the activation of procaspase 3 by cytochrome c and dATP in an ATP dependent manner. Hsps are intracellular proteins which are thought to serve protective functions against infection and cellular stress, however several recent studies indicate that members of the Hsp60 family are linked to a number of autoimmune diseases, artherosclerosis and chlamydial disease.

Hsp 60 Antibody (N-term) Blocking Peptide - References

Velez,D.R., et.al., Am. J. Obstet. Gynecol. 200 (2), 209 (2009)