abcam

Product datasheet

Anti-DnaK antibody ab80161

3 References 1 Image

Overview

Product name	Anti-DnaK antibody
Description	Rabbit polyclonal to DnaK
Host species	Rabbit
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Chlamydomonas reinhardtii
Immunogen	Recombinant full length DnaK of Chlamydomonas reinhardtii
Positive control	WB: Arabidopsis thaliana leaf extract.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	Constituent: Whole serum
Purity	Whole antiserum
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab80161 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/5000. Detects a band of approximately 70 kDa.

Target

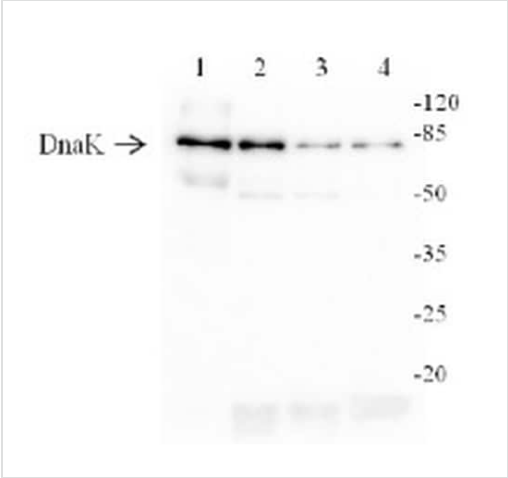
Relevance

DnaK is the prokaryotic analogue of eukaryotic Hsp70. Heat shock proteins applies to a group of proteins that assist in the assembly, folding, and translocation of other proteins. In addition, they protect the cell against heat injury or other forms of stress. All cells, prokaryotic and eukaryotic, are able to respond to different cellular stresses by synthesizing these proteins. Heat shock proteins are highly conserved, ubiquitously distributed, and involved in important aspects of viral and bacterial infections, autoimmune diseases, and in cancer immunity. Two families of molecular chaperones have been identified. The members of the Hsp70 family (DnaK/DnaJ/GrpE) bind to the growing polypeptide chain and prevent its premature folding. The chaperonin family (GroEL and GroES) assists in correct folding when the complete polypeptide chain is formed and is transported into the cytosol or mitochondria. All the major heat shock proteins help to suppress irreversible unfolding reactions. These protein folding 'assistants' may have important functions in amyloid diseases where incorrectly folded proteins accumulate as folded aggregates.

Cellular localization

Cytoplasm. Cell inner membrane; Peripheral membrane protein.

Images



Western blot - Anti-DnaK antibody (ab80161)

Lane 1. 15 µg of Arabidopsis thaliana leaf extract.

Lane 2. 10 µg of total protein from: Synechocystis 6803 motile.

Lane 3. Synechocystis 6803 GT (glucose tolerant strain).

Lane 4. Synechococcus elongates 7942.

Marker – Pierce™ Pre-stained Protein MW Marker (kat #26612)

Total protein was extracted with following buffer: 10 mM Tris HCl, pH 8.0, 0.5% LDS, 4% glycerol, 0.1 mM EDTA were mixed with sample buffer and denatured for 5 min at 95°C. Samples were separated on 10% SDS -PAGE and blotted for 1h to nitrocellulose membrane (Amersham Protran) using tank wet transfer (Bio-Rad) in standard transfer buffer in the presence of 20% methanol. Transfer of proteins to the membrane was checked using 0.5% Ponceau S staining before the blocking step. Blots were blocked in buffer (2% low-fat milk in 1xPBS, 0.1% Tween) for 1 h at room temperature (RT) with agitation. Blots were incubated with the primary antibody (ab80161) at a dilution of 1/5000 for 1h at RT with agitation. The antibody solution was decanted and the blot was rinsed briefly twice, then washed once for 15 min and 3 times for 5 min in PBS-T at RT with agitation. The blot was incubated in secondary antibody goat anti-rabbit IgG, diluted to 1/30000 for 1h at RT with agitation. The blot was washed as above and developed for 5 min with Clarity

Western ECL Substrate and ChemiDoc detection system (Bio-Rad).

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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