

HSP60 (rat), (recombinant)

Recombinant rat Hsp60, a mitochondrial chaperone that facilitates protein folding and oligomer assembly, stress-inducible and associated with immune and inflammatory responses.

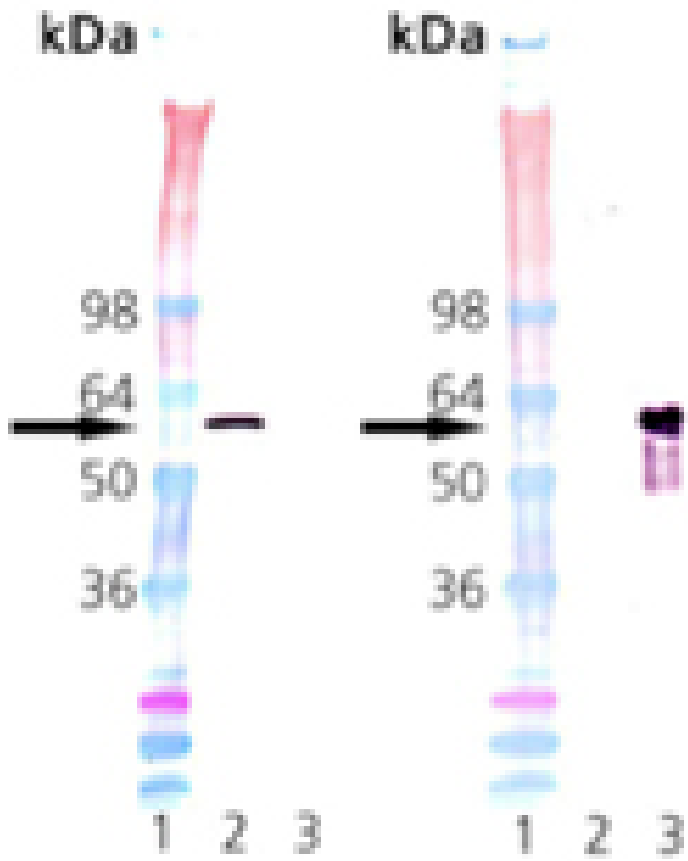
Rat Hsp60 belongs to a highly conserved family that includes molecular chaperones from a variety of species such as plant Hsp60 (known as Rubisco binding protein), GroEL, the *E. coli* Hsp60, and the 65 kDa major antigen of mycobacteria. Hsp60 is localized in the mitochondrial matrix of eukaryotes, and in the chloroplast of plants. Hsp60s from divergent species share a number of common characteristics: high abundance; induction with environmental stress such as heat shock; homo-oligomeric structures of either 7 or 14 subunits which reversibly dissociate in the presence of Mg⁺ and ATP; ATPase activity; and a role in folding and assembly of oligomeric protein structures. These similarities correspond with studies in which the single-ring human mitochondrial homolog Hsp60 and its co-chaperonin Hsp10 were expressed in an *E. coli* strain engineered to keep the groE operon under strict regulatory control. The findings demonstrate that expression of Hsp60 -Hsp10 enabled successful performance of all essential *in vivo* functions of GroEL and its co-chaperonin, GroES. Several studies reveal a possible link between members of the Hsp60 family and a number of autoimmune diseases, atherosclerosis, and chlamydial disease. Overexpression of self Hsp60 is seen in the synovial tissue of rheumatoid arthritic (RA) patients, and can accompany both cellular and humoral reactivity against Hsp60 in RA. Chlamydial heat shock protein Hsp60, a homolog of *E. coli* GroEL, appears capable of eliciting macrophage activation, and several studies reveal a correlation between Hsp60 responses and the immunopathologic manifestations of human chlamydial disease.

Citations: 2

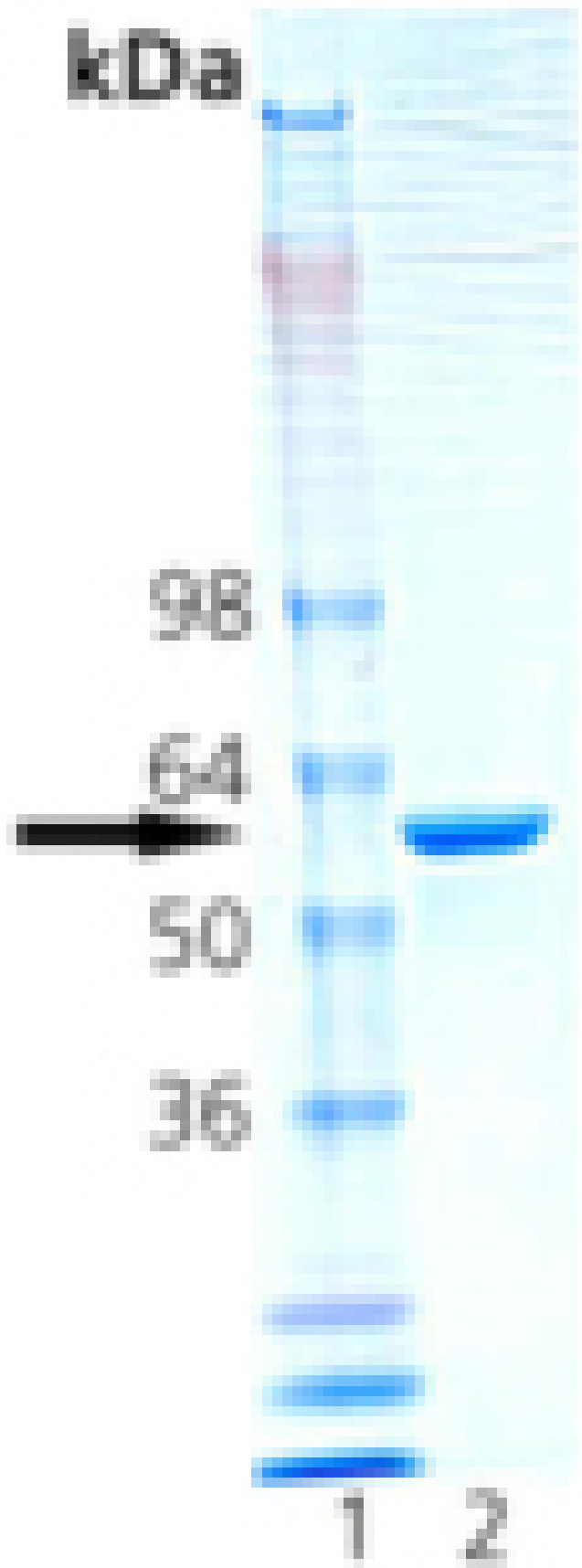
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Manuals, SDS & CofA

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Western Blot analysis: Lane 1: MW marker; Lane 2: 100ng Rat HSP60 Protein (Prod. No. ADI-SPP-742); Lane 3: 100ng E. coli GroEL Protein (Prod. No. ADI-SPP-610); Left Blot probed with HSP60 mAb (Prod. No. ADI-SPA-806) at 1.0 μ g/ml; Right Blot probed with GroEL mAb (Prod. No. ADI-SPS-870) at 1.0 μ g/ml



SDS-PAGE analysis: Lane 1: MWM, Lane 2: 2.0 μ g of purified Rat HSP60 Protein (Prod. No. ADI-SPP-742)

Handling & Storage

Long Term Storage -80°C

Shipping Dry Ice

Regulatory Status RUO - Research Use Only

Product Details

Alternative Name Chaperonin 60, CPN60, HspD1, Heat shock protein 60

Application Notes ATPase activity assay (positive). Western blot control.

Formulation Liquid. In 50mM TRIS-HCl, pH 7.5, containing 150mM sodium chloride, 0.1mM PMSF, and 1.0mM DTT.

MW ~60kDa

Purity ≥85% (SDS-PAGE; Western blot)

Purity Detail Purified by multi-step chromatography.

Source Produced in *E. coli*.

UniProt ID P63039

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