Hsp60 (HspD1) Polyclonal Antibody
Item No. 24531

Overview and Properties

Contents: This vial contains 100 μg of protein A-purified antibody
Synonyms: 60 kDa Chaperonin, Chaperonin 60, Cpn60, Heat Shock Protein 60,
Mitochondrial Matrix Protein P1, P60 Lymphocyte Protein
Immunogen: Human recombinant Hsp60 (HspD1)
Species Reactivity: (+) Human; other species not tested
Uniprot No.: P10809
Form: Liquid
Storage: -20°C (as supplied)
Stability: ≥1 year
Storage Buffer: PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host: Rabbit
Applications: ELISA, Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution for IHC is 1:200, and 1:1,000 for ELISA and WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images

Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human liver tissue after heat induced antigen retrieval in pH 6.0 citrate buffer. After incubation with Hsp60 (HspD1) polyclonal antibody, (Item No. 24531), at a 1:200 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).

Lane 1: Hsp60 (HspD1) Recombinant Protein (0.1 μg)
Lane 2: Hsp27 (HspB1) Recombinant Protein (0.1 μg) [Negative Control]
Lane 3: Jurkat Cell Lysate (50 μg)
Lane 4: A549 Cell Lysate (50 μg)
Lane 5: HeLa Heat Shock Cell Lysate (50 μg)
Description

Heat shock protein 60 (Hsp60), also known as heat shock protein family D member 1 (HspD1), is an approximately 60 kDa protein that functions as a molecular chaperone.\(^1\) It belongs to the type I subclass of chaperonins and is found in eubacteria, mitochondria, and chloroplasts where its expression is induced by stress. Hsp60 primarily exists as a heptameric ring that it is converted to a tetradecameric double-ring structure in the presence of ATP.\(^2\) Within mitochondria, it associates with its co-chaperone, Hsp10, to form a barrel-like structure and refold proteins that have been shuttled to the mitochondria in an ATP-dependent manner.\(^2,3\) Hsp60 also has extramitochondrial functions such as the production of proinflammatory cytokines in human leukocytes and activation of innate immune receptors.\(^4,5\) Hsp60 expression is increased in the serum and saliva of patients with type 2 diabetes mellitus and mutations in \textit{HSPD1} lead to neurodegenerative diseases.\(^5,6\) Cayman’s Hsp60 (HspD1) Polyclonal Antibody can be used for Western blot and ELISA applications. The antibody recognizes Hsp60 (HspD1) at 60 kDa from human samples.

References