Recombinant Human HSPD1 protein, His-tagged

Cat. No. HSPD1-241H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human HSPD1 fused with His tag was expressed in E. coli.
Species	Human
Source	E.coli
Description	HSPD1, also known as HSP60, is a member of the chaperonin family. HSPD1 may function as a signaling molecule in the innate immune system. This protein is essential for the folding and assembly of newly imported proteins in the mitochondria. It may also prevent misfolding and promote the refolding and proper assembly of unfolded polypeptides generated under stress conditions in the mitochondrial matrix. HSPD1 gene is adjacent to a related family member and the region between the 2 genes functions as a bidirectional promoter. Several pseudogenes have been associated with this gene. Mutations associated with this gene cause autosomal recessive spastic paraplegia 13.Defects in HSPD1 are a cause of spastic paraplegia autosomal dominant type 13 (SPG13). Spastic paraplegia is a degenerative spinal cord disorder characterized by a slow, gradual, progressive weakness and spasticity of the lower limbs. Defects in HSPD1 are the cause of leukodystrophy hypomyelinating type 4 (HLD4); also called mitochondrial HSP60 chaperonopathy or MitCHAP-60 disease. HLD4 is a severe autosomal recessive hypomyelinating leukodystrophy. HSPD1 is cinically characterized by infantile-onset rotary nystagmus, progressive spastic paraplegia, neurologic regression, motor impairment, profound mental retardation. Death usually occurrs within the first two decades of life.

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Form	Lyophilized from sterile PBS, pH 7.4
Purity	> 95 % as determined by SDS-PAGE
Storage	Store at -70 centigrade. Avoid repeated freeze/thaw cycles.

GENE INFORMATION

Gene Name	HSPD1 heat shock 60kDa protein 1 (chaperonin) [Homo sapiens]
Official Symbol	HSPD1
Synonyms	HSPD1; heat shock 60kDa protein 1 (chaperonin); heat shock 60kD protein 1 (chaperonin) , spastic paraplegia 13 (autosomal dominant) , SPG13; 60 kDa heat shock protein, mitochondrial; GROEL; HSP60; chaperonin 60; 60 kDa chaperonin; heat shock protein 65; P60 lymphocyte protein; mitochondrial matrix protein P1; short heat shock protein 60 Hsp60s1; HLD4; CPN60; HSP65; SPG13; HSP-60; HuCHA60;
Gene ID	3329
mRNA Refseq	NM_002156
Protein Refseq	NP_002147
MIM	118190
UniProt ID	P10809
Chromosome Location	2q33.1
Pathway	Legionellosis, organism-specific biosystem; Legionellosis, conserved biosystem;

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	Metabolism of proteins, organism-specific biosystem; Mitochondrial Protein Import, organism-specific biosystem; RNA degradation, organism-specific biosystem; RNA degradation, conserved biosystem; SIDS Susceptibility Pathways, organism-specific biosystem;
Function	ATP binding; ATPase activity; DNA replication origin binding; cell surface binding; chaperone binding; lipopolysaccharide binding; nucleotide binding; p53 binding; protein binding; single-stranded DNA binding; unfolded protein binding; unfolded protein binding;

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