

**RPES8056**

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## Product Information

<b>Product SKU:</b> RPES8056	<b>Expression Host:</b> E.coli	<b>Size:</b> 20µg
<b>Tag:</b> N-Gst	<b>Reactivity:</b> Human	<b>Accession:</b> P0DMV8-1

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## Additional Information

<b>Calculated MW:</b> 64.5 kDa	<b>Observed MW:</b> 65 kDa
<b>Sequence:</b> Ile291-Asp641	

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## Protein Information

**Background:** HSPA1A is a member of the Hsp70 protein family. The 70 kilodalton heat shock proteins (Hsp70s) are a family of ubiquitously expressed heat shock proteins. HSP are abundant and conserved proteins present in all cells. Upon temperature shock or other stress stimuli, HSP is synthesized intracellularly, which may protect cells from protein denaturation or death. Extracellularly, HSP can serve a cytokine function to initiate both innate and adaptive immunity through activation of APC. HSP serves also a chaperone function and facilitates the presentation of antigen peptide to T cells. Molecular chaperones of the Hsp70 family have diverse functions in cells. They assist the folding of newly synthesized and stress-denatured proteins, as well as the import of proteins into organelles, and the dissociation of aggregated proteins. The well-conserved Hsp70 chaperones are ATP dependent: binding and hydrolysis of ATP regulate their interactions with unfolded polypeptide substrates, and ATPase cycling is necessary for their function. All cellular functions of Hsp70 chaperones use the same mechanism of ATP-driven polypeptide binding and release.

**Synonyms:** heat shock protein family A (Hsp70) member 1A, heat shock protein family A (Hsp70) member 1B, HSP70-1B, HSP70-2, HSP70.2

**Endotoxin:** < 10 EU/mg of the protein as determined by the LAL method

**Formulation:** Lyophilized from a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.

**Purity:** > 90% as determined by reducing SDS-PAGE.

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**Bio-Activity:**

Not validated for activity

**Storage:**

Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.