

ENSA Protein, Human (Biotinylated, His)

Cat. No.:	HY-P77544
Synonyms:	Alpha-endosulfine; ARPP-19e; ENSA
Species:	Human
Source:	E. coli
Accession:	O43768 (M1-E121)
Gene ID:	2029
Molecular Weight:	Approximately 18 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	ENSA protein, a pivotal phosphatase inhibitor, exerts precise control over protein phosphatase 2A (PP2A) during mitosis, specifically inhibiting its activity. Phosphorylation at Ser-67 during mitosis facilitates a specific interaction with PPP2R2D (PR55-delta), leading to the inactivation of PP2A. This orchestrated inactivation of PP2A is crucial for maintaining high cyclin-B1-CDK1 activity during the M phase, underscoring ENSA's regulatory role in cell cycle progression. Beyond its mitotic functions, ENSA also operates as a stimulator of insulin secretion by interacting with the sulfonylurea receptor (ABCC8), preventing sulfonylurea binding and reducing K(ATP) channel currents. Notably, ENSA's interactions with PPP2R2D and ABCC8 highlight its diverse roles in both cell cycle control and insulin secretion regulation, showcasing its significance in maintaining cellular homeostasis and functional integrity. Additionally, ENSA's interaction with SNCA, disrupted upon phosphorylation at Ser-109, further emphasizes its dynamic involvement in cellular processes.
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Caution: Product has not been fully validated for medical applications. For research use only.

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