NLRP5 Protein, Human (Sf9)

Cat. No.:	HY-P702003
Synonyms:	NLRP5; NACHT; LRR and PYD domains-containing protein 5; Mater protein homolog; Maternal Antigen that Embryos Require
Species:	Human
Source:	Sf9 insect cells
Accession:	P59047 (G227-N1200)
Gene ID:	126206
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 μm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	NLRP5, a vital component of the subcortical maternal complex (SCMC), plays a crucial role in facilitating the progression of zygotes beyond the initial embryonic cell divisions by regulating actin dynamics. Its involvement in the formation of F-actin cytoplasmic lattices (CPL) in oocytes is essential for ensuring the symmetric division of zygotes through the regulation of mitotic spindle formation and positioning. Additionally, NLRP5 is required for the localization of cortical granules to the oocyte cortex, achieved through its association with the cortical actin scaffold. Furthermore, it contributes to cortical actin clearance preceding oocyte exocytosis. NLRP5 is implicated in the regulation of post-fertilization Ca(2+) release and endoplasmic reticulum (ER) storage by influencing ER localization. Its potential involvement in the localization of mitochondria in oocytes and early embryos, independent of CPL formation, adds another layer to its multifaceted functions. Within the SCMC, NLRP5 interacts with other components such as OOEP, KHDC3, and TLE6, and may facilitate the translocation of these components between nuclear and cytoplasmic compartments. Additionally, NLRP5 interacts with PRKCE and TUBB3, highlighting its diverse molecular associations.

Caution: Product has not been fully validated for medical applications. For research use only.

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