

## WBP2 Protein, Human (His)

Cat. No.:	HY-P71431
Synonyms:	WW Domain-Binding Protein 2; WBP-2; WBP2
Species:	Human
Source:	E. coli
Accession:	Q969T9 (M1-A100)
Gene ID:	23558
Molecular Weight:	Approximately 14.0 kDa

### PROPERTIES

AA Sequence	<p>M A L N K N H S E G      G G V I V N N T E S      I L M S Y D H V E L      T F N D M K N V P E</p> <p>A F K G T K K G T V      Y L T P Y R V I F L      S K G K D A M Q S F      M M P F Y L M K D C</p> <p>E I K Q P V F G A N      Y I K G T V K A E A</p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM Tris-HCl, 1 mM DTT, 5% Trehalose, pH 8.0.
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 <sub>2</sub> 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	<p>NLRP1 protein acts as the sensor component of the NLRP1 inflammasome, a crucial mediator of inflammasome activation in response to various pathogen-associated signals, leading to subsequent pyroptosis. As a recognition receptor, NLRP1 identifies specific pathogens and damage-associated signals, initiating the formation of the inflammasome polymeric complex composed of NLRP1, CASP1, and PYCARD/ASC. Upon pathogen-associated signals, the N-terminal part of NLRP1 is degraded, releasing the cleaved C-terminal part, which polymerizes and associates with PYCARD/ASC. This complex recruits pro-caspase-1, promoting caspase-1 activation and subsequently cleaving and activating inflammatory cytokines IL1B and IL18, along with gasdermin-D (GSDMD), leading to pyroptosis. In the absence of GSDMD, the NLRP1 inflammasome recruits and activates CASP8, leading to gasdermin-E (GSDME) activation. NLRP1 activation is also required for HMGB1 secretion, stimulating inflammatory responses. Recognizing pathogen-associated signals like human rhinoviruses, positive-strand RNA viruses, and muramyl dipeptide, NLRP1 plays a pivotal role in antiviral immunity and inflammation. Additionally, UV-B</p>
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irradiation induces ribosome collisions, activating NLRP1 through MAP3K20-dependent phosphorylation and leading to pyroptosis. NLRP1 constitutes the precursor of the NLRP1 inflammasome, undergoing autoproteolytic processing within the FIIND domain in response to pathogens and damage-associated signals.

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

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