





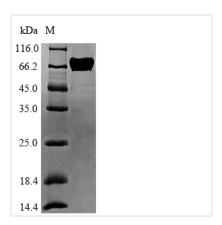
Recombinant Arachis hypogaea Allergen Ara h 1, clone P17

Product Code	CSB-EP331779ANE(A4)
Abbreviation	Recombinant Arachis hypogaea Allergen Ara h 1, clone P17 protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P43237
Alias	Allergen Ara h I
Product Type	Recombinant Protein
Immunogen Species	Arachis hypogaea (Peanut)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	KSPYRKTENPCAQRCLQSCQQEPDDLKQKACESRCTKLEYDPRCVYDTGAT NQRHPPGERTRGRQPGDYDDDRRQPRREEGGRWGPAEPREREREDWRQ PREDWRRPSHQQPRKIRPEGREGEQEWGTPGSEVREETSRNNPFYFPSRRF STRYGNQNGRIRVLQRFDQRSKQFQNLQNHRIVQIEARPNTLVLPKHADADNI LVIQQGQATVTVANGNNRKSFNLDEGHALRIPSGFISYILNRHDNQNLRVAKIS MPVNTPGQFEDFFPASSRDQSSYLQGFSRNTLEAAFNAEFNEIRRVLLEENAG GEQEERGQRRRSTRSSDNEGVIVKVSKEHVQELTKHAKSVSKKGSEEEDITN PINLRDGEPDLSNNFGRLFEVKPDKKNPQLQDLDMMLTCVEIKEGALMLPHFN SKAMVIVVVNKGTGNLELVAVRKEQQQRGRREQEWEEEEEDEEEEGSNREV RRYTARLKEGDVFIMPAAHPVAINASSELHLLGFGINAENNHRIFLAGDKDNVID QIEKQAKDLAFPGSGEQVEKLIKNQRESHFVSARPQSQSPSSPEKEDQEEEN QGGKGPLLSILKAFN
Research Area	Allergen
Source	E.coli
Expression Region	26-614aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	71.7kDa
Protein Length	Full Length of Mature Protein
Image	

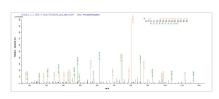
CUSABIO TECHNOLOGY LLC



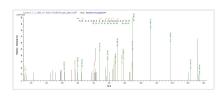




(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Based on the SEQUEST from database of E.coli host and target protein, the LC-MS/MS Analysis result of CSB-EP331779ANE(A4) could indicate that this peptide derived from E.coli-expressed Arachis hypogaea (Peanut) N/A.



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Description

To produce recombinant Arachis hypogaea Allergen Ara h 1, clone P17, the first step involves isolating the gene encoding the 26-614aa of the Allergen Ara h 1, clone P17. This gene is cloned into an appropriate expression vector along with an N-terminal 6xHis-tag gene. The vector is introduced into an E.coli cell via transformation. Inside the host cell, the target gene is expressed, leading to the production of the recombinant protein. The protein is harvested from the cell lysate and purified often using affinity chromatography. The final step is to determine the purity of this recombinant Arachis hypogaea Allergen Ara h 1, clone P17 by SDS-PAGE. Its purity is greater than 90%.

Arachis hypogaea Allergen Ara h 1, clone P17 is a variant of the major peanut allergen Ara h 1 found in peanuts, which along with Ara h 2 and Ara h 3, contributes significantly to peanut allergies [1][2][3]. The allergenicity of Ara h 1 has been linked to the specific arrangement of monomers in the homotrimeric structure of vicilin/7S globulin proteins [4]. Peanut allergies, mediated by immunoglobulin E (IgE) sensitization to various proteins including Ara h allergens, are a significant and potentially life-threatening health concern.

References:

[1] K. Hilu, S. Friend, V. Vallanadu, L. Hollingsworth, & D. Bevan, Molecular evolution of genes encoding allergen proteins in the peanuts genus arachis: structural and functional implications, Plos One, vol. 14, no. 11, p. e0222440, 2019. https://doi.org/10.1371/journal.pone.0222440

[2] A. Barre, C. Nguyen, C. Granier, H. Benoist, & P. Rougé, Ige-binding epitopes of pis v 1, pis v 2 and pis v 3, the pistachio (pistacia vera) seed allergens, Allergies, vol. 1, no. 1, p. 63-91, 2021.



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https://doi.org/10.3390/allergies1010006

[3] M. Shen, A. Joshi, R. Vannam, C. Dixit, R. Hamilton, C. Kumaret al., Epitope?resolved detection of peanut?specific ige antibodies by surface plasmon resonance imaging, Chembiochem, vol. 19, no. 3, p. 199-202, 2018. https://doi.org/10.1002/cbic.201700513

[4] L. Lange, K. Beyer, & J. Kleine-Tebbe, Benefits and limitations of molecular diagnostics in peanut allergy, Allergo Journal International, vol. 23, no. 5, p. 158-163, 2014. https://doi.org/10.1007/s40629-014-0019-z

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.