

PAPP-A2 Protein, Human, Recombinant (His)

General Information

Synonyms:	pappalysin 2;PAPP-E;PLAC3;PAPPE;PAPP-A2
Protein Construction:	A DNA sequence encoding the human PAPPA2 mature form (NP_064714.2) corresponding to amino acid (Ser 234-Cys 1396) was expressed, with a carboxy-terminal polyhistidine tag. Predicted N terminal: Ser 234
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9BXP8-1
Molecular Weight:	131 kDa (predicted); 170-180 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Pappalysin-2/PAPP-A2 is the second member of the pappalysin family of metzincin superfamily, of which PAPP-A is the first member. There is no homology between the prepro-peptides of PAPP-A and PAPP-A2, but 46% of the residues of mature PAPP-A are also present in mature PAPP-A2. PAPP-A specifically cleaves insulin-like growth factor-binding protein(IGFBP)-4, one of six known modulators of IGF-I and -II, whereas PAPP-A2 specifically

cleaved IGFBP-5 at one site, between Ser-143 and Lys-144. In contrast to the cleavage of IGFBP-4 by PAPP-A that strictly requires the presence of IGF, the cleavage of IGFBP-5 by PAPP-A2 was IGF-independent. Recent data firmly establish PAPP-A and IGFBP-4 as an important functional pair in several systems. Because of its close relationship with PAPP-A, both structurally and functionally, PAPP-A2 is a likely candidate for IGFBP-5 proteinase in many tissues and conditioned media where IGFBP-5 proteolysis has been reported.

Reference

Lisbeth S Laursen. et al., 2002, Vol. 277 (49): 47225-34.

Michael T Overgaard. et al., 2001, The Journal of Biological Chemistry. 276 (24): 21849-53.

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