

## APCDD1 Protein, Human, Recombinant (His)

### General Information

Synonyms:	HHS;B7323;Apcdd1;Drapc1;HYPT1;HTS;FP7019
Protein Construction:	Leu27-His492
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q8J025
Molecular Weight:	54.4 kDa (predicted). Due to glycosylation, the protein migrates to 58-68 kDa based on Tris-Bis PAGE result.

### QC Testing

Biological Activity:	Immobilized Human APCDD1, His Tag at 2µg/ml (100µl/well) on the plate. Dose response curve for Anti-APCDD1 Antibody, hFc Tag with the EC50 of 4.7ng/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis 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, 8% trehalose is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### 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

Adenomatosis polyposis coli downregulated 1 (APCDD1), a negative regulator of Wnt signaling, was examined to understand detailed mechanisms underlying Wnt signaling tooth development. In situ hybridization showed that Apcdd1 was expressed in the condensed mesenchyme at the bud stage, and in the inner enamel epithelium (IEE), including enamel knot (EK) at the cap stage. APCDD1 modulates the gene expression of Wnt- and EK-related signaling molecules at the cap stage of tooth development, and is involved in tooth cusp patterning by

modulating the epithelial rearrangement in the IEE.

Reference

Neupane S, et al. The role of APCDD1 in epithelial rearrangement in tooth morphogenesis. *Histochem Cell Biol.* 2015 Oct;144(4):377-87. doi: 10.1007/s00418-015-1345-z. Epub 2015 Jul 14. PMID: 26170146.

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