

Recombinant Human CER1/DAND4 Protein

Catalog No.: RP01793

Sequence Information

Species **Gene ID**
Human 9350

Swiss Prot **Tags**
O95813 C-His

Synonyms
DAND4;CER1

Product Information

Source **Purification**
HEK293 cells ≥ 95 % as
 determined by
 SDS-PAGE.

Calculated MWObserved MW
28.99 kDa 35–50 kDa

Endotoxin
< 0.01 EU/μg of the protein by LAL
method

Formulation
Lyophilized from a 0.22 μm filtered
solution of 25mM NaAc pH 7.4.

Reconstitution
Centrifuge the vial before opening.
Reconstitute to a concentration of
0.1–0.5 mg/mL in sterile distilled
water. Avoid vortex or vigorously
pipetting the protein. For long
term storage, it is recommended
to add a carrier protein or stabilizer
(e.g. 0.1% BSA, 5% HSA, 10% FBS
or 5% Trehalose), and aliquot the
reconstituted protein solution to
minimize free-thaw cycles.

Background

Cerberus 1, also called DAND4, is a member of the DAN domain family of BMP antagonists that includes DAN (DAND1), Gremlin/Drm (DAND2), PRDC (Protein Related to Dan and Cerberus; DAND3), and COCO/Dante (DAND5). DAN family members contain a cysteine-knot domain that is homologous to that found in other TGF-beta superfamily ligands. Mature human Cerberus 1 shares 67% and 68% amino acid (aa) sequence identity with mouse and rat Cerberus 1, respectively. Within the cysteine-knot domain, it shares 24%–37% aa sequence identity with mouse DAN, Gremlin, PRDC, and COCO. Cerberus 1 is a secreted 38 kDa glycoprotein that forms homodimers. Cerberus-S, which is generated by proteolysis in *Xenopus*, is a short version of the molecule and includes the C-terminal cysteine-knot domain. At the onset of gastrulation, Cerberus 1 is transiently expressed in anterior endodermal structures in response to Nodal and Shh. Cerberus 1 binds BMP-4 and Nodal and inhibits their activities. *Xenopus* Cerberus has also been shown to bind *Xenopus* Wnt8. These inhibitory functions of Cerberus favor mesodermal development in the anterior region of the gastrula and suppresses posterior mesodermal differentiation. In chick and *Xenopus*, Cerberus 1 also regulates, but is not required for embryonic left-right polarization, neurulation, and head and heart induction.

Basic Information

Description

Recombinant Human CER1/DAND4 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Thr18-Ala267) of human CER1/DAND4 (Accession #NP_005445.1) fused with a 6×His tag at the C-terminus.

Activity

Shipping

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

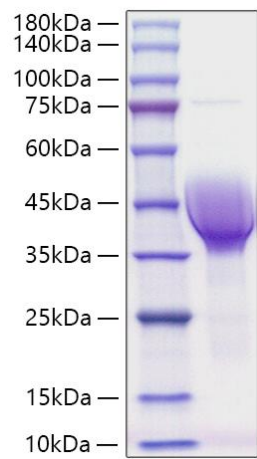
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Validation Data



Recombinant Human CER1/DAND4 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.