

## Recombinant Human CER1, His-tagged

**Cat. No.** CER1-7775H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>Product Overview</b> | Recombinant Human Cerberus 1/CER1 is produced with our mammalian cells expression system in HEK293. The target protein is expressed with sequence (Met1Ala267) of Human CER1 fused with a polyhistidine tag at the Cterminus.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Description</b>      | Cerberus 1 is a secreted glycoprotein that forms disulfidelinked homodimers. It is a cytokine 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 TGFbeta superfamily ligands. At the onset of gastrulation, Cerberus 1 is transiently expressed in anterior endodermal structures in response to Nodal and Shh. Cerberus 1 binds BMP4 and Nodal and inhibits their activities. The 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 leftright polarization, neurulation, and head and heart induction. |
| <b>Form</b>             | Lyophilized from a 0.2 µM filtered solution of 20mM Hac                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>AA Sequence</b>      | TRHQDGRQNQ SSLSPVLLPR NQRELPTGNH EEAEKPDLF VAVPHLVGTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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PAGEGQRQRE KMLSRFGRF WKKPEREMHP SRDSDSEPFP PGTQSLIQPI  
DGMKMEKSPL REEAKKFWHH F MFRKTPAS QGVILPIKSH EVHWETCRTV  
PFSQTITHEG CEKLVVQNNL CFGKCGSVHF PG AAQHSHT SCSHCLPAKF  
TTMHLPLNCT ELSSVIKVVM LVEECQCKVK TEHEDGHILH AGS QDSFIP  
GVSAVDHHHH

**Purity** Greater than 95% as determined by SEC-HPLC and reducing SDS-PAGE.

**Notes** For research use only.

**Storage** Lyophilized protein should be stored at less than 20°C. though stable at room temperature for 3 weeks.Reconstituted protein solution can be stored at 4-7°C. for 2-7 days.Aliquots of reconstituted samples are stable at less than 20°C. for 3 months.

## GENE INFORMATION

**Gene Name** CER1 cerberus 1, cysteine knot superfamily, homolog (Xenopus laevis) [ Homo sapiens ]

**Official Symbol** CER1

**Synonyms** CER1; cerberus 1, cysteine knot superfamily, homolog (Xenopus laevis); cerberus 1 (Xenopus laevis) homolog (cysteine knot superfamily); cerberus; DAND4; cerberus-related 1; cerberus-related protein; DAN domain family member 4; MGC96951; MGC119894; MGC119895;

**Gene ID** 9350

**mRNA Refseq** NM\_005454

**Protein Refseq** NP\_005445

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|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MIM</b>                 | 603777                                                                                                                                                                                                                                                                                                                                                                        |
| <b>UniProt ID</b>          | O95813                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Chromosome Location</b> | 9p23-p22                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Pathway</b>             | BMP receptor signaling, organism-specific biosystem; Developmental Biology, organism-specific biosystem; Regulation of Signaling by NODAL, organism-specific biosystem; Signal Transduction, organism-specific biosystem; Signaling by BMP, organism-specific biosystem; Signaling by NODAL, organism-specific biosystem; Wnt signaling pathway, organism-specific biosystem; |
| <b>Function</b>            | cytokine activity; molecular_function; protein homodimerization activity;                                                                                                                                                                                                                                                                                                     |

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