

Human Lefty2 / Lefty A Protein (Fc Tag)

Catalog Number: 10248-H01H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

LEFTY2, EBAF, LEFTA, LEFTYA, MGC46222, TGFB4

Protein Construction:

A DNA sequence encoding the mature form of human LeftyA (NP_003231.2) (Phe 78-Pro 366) was fused with the Fc region of human IgG1 at the N-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio-Activity

Measured by its ability to inhibit recombinant human BMP4 induced alkaline phosphatase production by MC3T3-E1 cells. The ED50 for this effect is typically 4-16 µg/mL in the presence of 50 ng/mL of recombinant human BMP4.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Glu 20

Molecular Mass:

The recombinant human LeftyA/Fc is a disulfide-linked homodimer. The reduced monomer consists of 526 amino acids and has a predicted molecular mass of 58.8 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rh LeftyA/Fc monomer is approximately 70 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

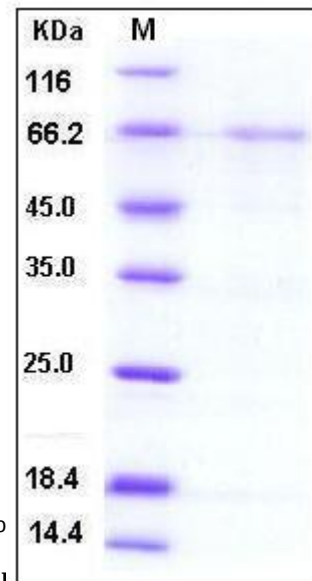
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution

e products.

Protein Description

Lefty is a novel subfamily of the TGF- β protein superfamily and is composed of lefty-1 and lefty-2 in mouse and their homologs, lefty A and lefty B, in human. lefty-1 and lefty-2 both exhibit an asymmetric expression on the left side of gastrulating mouse embryos. lefty-1 expression is predominantly confined to the left side of the ventral neural tube, whereas lefty-2 is strongly expressed in the lateral plate mesoderm on the left side. Lefty protein contains the cysteine-knot motif characteristic of this superfamily and is secreted as a processed form of relative molecular mass 25-32 kDa. Lefty plays an essential role in LR-axis specification. Initially, Lefty proteins were thought to act as antagonists of Nodal, potentially by competing for binding to a common receptor. Nodal induces mesoderm and endoderm, patterns the nervous system, and specifies left-right (L-R) asymmetry in vertebrates. Lefty 1 and Lefty 2 both block Nodal signaling by binding Nodal and its EGF-CFC coreceptors such as TDGF-1/Cripto. Lefty is more than a simple Nodal inhibitor and that it is required for normal patterning by the organizer and in normal gastrulation.

References

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4. Alexander F. Schier, Michael M. Shen, 1999, Nature, Vol. 403, 27.
5. James M. Mason, et al., 2002, The Journal of Biological Chemistry, Vol. 277, No. 1: 407-415.
6. Siamak Tabibzadeh, 2002, Frontiers in Bioscience, 7: 1231-1246.

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