

Lefty-A Protein, Human, Recombinant (His)

General Information

Synonyms:	Endometrial bleeding-associated factor;TGFB4;TGF- β -4;EBAF;LEFTA;LEFTYA;TGF-beta-4;Left-right determination factor A;Left-right determination factor 2;Transforming growth factor beta-4;Protein lefty-2;LEFTY2;Protein lefty-A;Transforming growth factor β -4
Protein Construction:	Phe78-Pro366
Species:	Human
Expression Host:	HEK293 Cells
Accession:	O00292
Molecular Weight:	45-50 KDa (reducing condition)
AA Sequence:	Phe78-Pro366

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 90% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/ μ g (1 EU/ μ g) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing 20 mM Histidine-HCl, 4% Sucrose, 4% Mannitol, 0.1% Tween 80, pH6.0.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μ g/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:

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

Left-right determination factor 2 (LEFTY2) is a secreted protein which belongs to the TGF- β family. Lefty was first identified in a screen for undifferentiated cell-specific cDNAs from the P19 mouse embryonal carcinoma cells. Its mRNA expression on the left side of the developing embryo earned the name "Lefty". The human orthologue was

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initially identified as Eba1, Endometrial bleeding associated factor. Lefty contains the six cysteine residues that are conserved among TGF- β related proteins and that are necessary to form the cysteine knot structure. Its function in patterning left-right asymmetry of the developing organ systems such as the heart and lung is consistent in all vertebrate species examined. Lefty acts as an antagonist to Nodal signaling, potentially by competing for binding to a common receptor. It may play a role in endometrial bleeding.

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