#12647 Store at -20°C

Lefty1 (D7E3G) Rabbit mAb

☑ 100 µl
(10 western blots)

Cell Signaling TECHNOLOGY®

Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

New 06/13

For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez Gene ID #10637
UniProt ID #075610

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Transfected	H, (M, R, Mk)	40 kDa	Rabbit IgG**

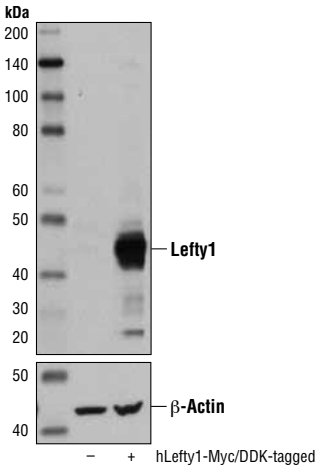
Background: Lefty proteins are members of the TGF-β family of cell signaling molecules that are involved in growth and development (1,2). Named for their role in left-right axis determination and their exclusive expression on the left side of the developing mouse embryo, lefty1 and lefty2 contain a cysteine-knot motif that is characteristic of TGF-β related proteins, but lack an alpha-helix and a cysteine residue critical for ligand dimerization (3). Early in vertebrate embryogenesis, lefty represses TGF-β signaling by inhibiting the phosphorylation of Smad2 following activation of the TGF-β receptor (4). Down-regulated very early upon differentiation (5), lefty proteins act as extracellular antagonists of the signaling pathway for Nodal, a TGF-β ligand critical for left-right patterning and formation of the mesoderm and endoderm (6). Similar to other members of the TGF-β superfamily, lefty proproteins undergo cleavage to release a bioactive protein (7). The biologically active 42 kDa lefty precursor and the 28 kDa polypeptide have been shown to induce MAPK activity (7).

Specificity/Sensitivity: Lefty1 (D7E3G) Rabbit mAb recognizes transfected levels of total lefty1 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro108 of human lefty1 protein.

Background References:

(1) Kingsley, D.M. (1994) *Genes Dev* 8, 133-46.
(2) Heldin, C.H. et al. (1997) *Nature* 390, 465-71.
(3) Meno, C. et al. (1997) *Genes Cells* 2, 513-24.
(4) Ulloa, L. and Tabibzadeh, S. (2001) *J Biol Chem* 276, 21397-404.
(5) Besser, D. (2004) *J Biol Chem* 279, 45076-84.
(6) Schier, A.F. (2003) *Annu Rev Cell Dev Biol* 19, 589-621.
(7) Ulloa, L. et al. (2001) *J Biol Chem* 276, 21387-96.



Western blot analysis of extracts from 293 cells, mock transfected (-) or transfected with a construct expressing Myc/DDK-tagged full-length human Lefty1 (hLefty1-Myc/DDK; +), using Lefty1 (D7E3G) Rabbit mAb (upper) and β-Actin (D6A8) Rabbit mAb #8457 (lower).

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.