

## Product datasheet for SC328536

### LEFTY2 (NM\_001172425) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	LEFTY2 (NM_001172425) Human Untagged Clone
Tag:	Tag Free
Symbol:	LEFTY2
Synonyms:	EBAF; LEFTA; LEFTYA; TGFB4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC328536 representing NM_001172425. Blue=Insert sequence Red=Cloning site Green=Tag(s)

GCTCGTTTAGTGAACCGTCAGAATTTTGAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTG  
 GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC  
 ATGTGGCCCTGTGGCTCTGCTGGGCACTCTGGGTGCTGCCCTGGCTGGCCCCGGGGCGGCCCTGACC  
 GAGGAGCAGCTCCTGGGCAGCCTGCTGCCGAGCTGCAGCTCAGCGAGGTGCCGTACTGGACAGGGCC  
 GACATGGAGAAGCTGGTCATCCCCGCCACGTGAGGGCCAGTATGTAGTCCTGCTGCGGCGCAGCCAC  
 GGGGACCCTCCCGCGAAAGAGGTTAGCCAGAGCTCCGAGAGGTGGCCGGCAGGTTCTTGGCGTCG  
 GAGGCCGCTGCACAGGCACGGCGGCTGTCCCGCGCAGCGCCAGGCCGGGTGACCGTCGAGTGG  
 CTGCGCTCCGCGACGAGGCTCAACCGCACCTCCCTCATCGACTCCAGGCTGGTGTCCGTCCACGAG  
 AGCGGCTGGAAGGCCTTCGACGTGACCGAGGCCGTGAACCTCTGGCAGCAGCTGAGCCGGCCCCGGCAG  
 CCGCTGTCTACAGGTGTCCGTGCAGAGGGAGCATCTGGGCCCGCTGGCGTCCGCGCCCAAGCTG  
 GTCCGCTTTGCCTCGCAGGGGGCGCCAGCCGGGCTTGGGGAGCCCCAGCTGGAGCTGCACACCCTGGAC  
 CTCAGGGACTATGGAGCTCAGGGCGACTGTGACCCTGAAGCACCATGACCGAGGGCACCCTGCTGC  
 CGCCAGGAGATGTACATTGACCTGCAGGGGATGAAGTGGGCCAAGAACTGGGTGCTGGAGCCCCGGGC  
 TTCCTGGCTTACGAGTGTGTGGGCACCTGCCAGCAGCCCCGAGGCCCTGGCCTCAATTGGCCATTT  
 CTGGGGCCGCGACAGTGTATCGCTCGGAGACTGCCTCGCTGCCATGATCGTCAGCATCAAGGAGGA  
 GGCAGGACCAGGCCAGGTGGTCAGCTGCCCAACATGAGGGTGCAGAAGTGCAGCTGTGCCTCGGAT  
 GGGCGCTCGTGCCAAGGAGGCTCCAGCCATAG  
 ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGAT  
 TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC

Restriction Sites:	SgfI-MluI
ACCN:	NM_001172425
Insert Size:	999 bp


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<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>OTI Annotation:</b>	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
<b>Components:</b>	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.</li> </ol>
<b>RefSeq:</b>	<u><a href="#">NM_001172425.1</a></u>
<b>RefSeq Size:</b>	2085 bp
<b>RefSeq ORF:</b>	999 bp
<b>Locus ID:</b>	7044
<b>UniProt ID:</b>	<u><a href="#">O00292</a></u>
<b>Cytogenetics:</b>	1q42.12
<b>Protein Families:</b>	Druggable Genome, Secreted Protein
<b>Protein Pathways:</b>	TGF-beta signaling pathway
<b>MW:</b>	37.1 kDa

**Gene Summary:**

This gene encodes a secreted ligand of the TGF-beta (transforming growth factor-beta) superfamily of proteins. Ligands of this family bind various TGF-beta receptors leading to recruitment and activation of SMAD family transcription factors that regulate gene expression. The encoded preproprotein is proteolytically processed to generate the mature protein, which plays a role in left-right asymmetry determination of organ systems during development. The protein may also play a role in endometrial bleeding. Mutations in this gene have been associated with left-right axis malformations, particularly in the heart and lungs. Some types of infertility have been associated with dysregulated expression of this gene in the endometrium. This gene is closely linked to both a related family member and a related pseudogene. This gene encodes multiple isoforms that may undergo similar proteolytic processing. [provided by RefSeq, Aug 2016]

Transcript Variant: This variant (2) uses an alternate in-frame splice site in the coding region, compared to variant 1. This results in a shorter protein (isoform 2), compared to isoform 1. This isoform (2) lacks a portion of the mature peptide compared to isoform 1, but may undergo proteolytic processing similar to isoform 1.