

DESCRIPTION

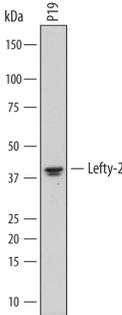
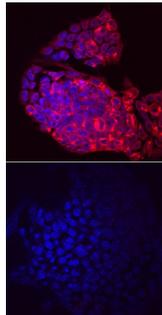
Species Reactivity	Mouse
Specificity	Detects mouse Lefty-2 in direct ELISAs and Western blots. In direct ELISAs, approximately 65% cross-reactivity with recombinant mouse Lefty-1 is observed, and approximately 20% cross-reactivity with recombinant human Lefty-2 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse Lefty-2 Phe78-Leu368 Accession # P57785
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Mouse Lefty-2 by Western Blot. Western blot shows lysates of P19 mouse embryonal carcinoma cell line. PVDF membrane was probed with 2 µg/mL of Sheep Anti-Mouse Lefty-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7648) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Lefty-2 at approximately 40 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunocytochemistry</p>  <p>Lefty-2 in D3 Mouse Embryonic Stem Cells. Lefty-2 was detected in immersion fixed D3 mouse embryonic stem cells untreated (lower panel) or stimulated (upper panel) with recombinant human/mouse/rat Activin A (Catalog # 338-AC) using Sheep Anti-Mouse Lefty-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7648) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to the cytoplasm of Activin A-stimulated cells. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Lefty-2 (Left-right determination factor 2; also Lefty-B [in human]) is a atypical member of the TGF-β family of proteins. It is expressed during early embryogenesis in both the primitive streak and left-side lateral plate mesoderm. In the adult, Lefty-2 appears in oviduct epithelium. Lefty-2 acts in a manner reminiscent of that for Chordin and Noggin, and it is assumed that Lefty-2 is an antagonist of BMP activity. Notably, Lefty-2 and Nodal are likely under the control of Lefty-1, and thus all three molecules would appear to contribute to the creation of a left side-type body plan. Mouse Lefty-2 is synthesized as a 368 amino acid (aa) preproprecursor. It contains a 21 aa signal sequence, plus a 347 aa, 41-42 kDa bioactive proprecursor that may undergo proteolytic processing at one of two downstream cleavage sites. If cleavage occurs after Arg77, the resulting 33-34 kDa mature form (aa 78-368) is biologically inactive; if cleavage occurs after Arg135, the resulting 27-28 kDa mature form (aa 136-368) is biologically active. Lefty-2 is not a covalent homodimer and has been suggested to act as a monomer. Over aa 78-368, mouse Lefty-2 shares 94%, 83% and 95% aa sequence identity with rat Lefty-2, human Lefty-B and mouse Lefty-1, respectively.