

DESCRIPTION

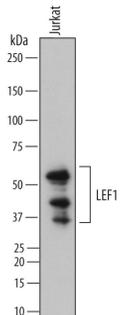
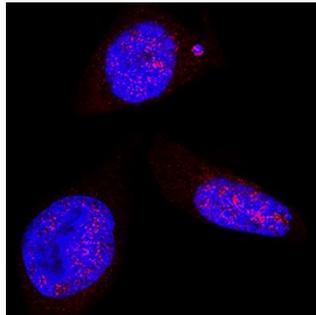
Species Reactivity	Human
Specificity	Detects human LEF1 in direct ELISAs and Western blots. In direct ELISAs, approximately 35% cross-reactivity with recombinant human (rh) TCF-1, rhTCF-2, and rhTCF-4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human LEF1 Met120-Met280 (predicted) Accession # Q9UJU2
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	0.2 µg/mL	See Below
Immunocytochemistry	1-15 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Human LEF1 by Western Blot. Western blot shows lysates of Jurkat human acute T cell leukemia cell line. PVDF membrane was probed with 0.2 µg/mL of Goat Anti-Human LEF1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7647) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). Specific bands were detected for LEF1 at approximately 35-55 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunocytochemistry</p>  <p>LEF1 in Neuro-2A Mouse Cell Line. LEF1 was detected in immersion fixed Neuro-2A mouse neuroblastoma cell line using Goat Anti-Human LEF1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7647) at 1.7 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to nuclei. 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

LEF1 (Lymphoid Enhancer-binding Factor 1) is a functionally diverse member of the TCF/LEF family of transcription factors. The name LEF1 was originally applied to the mouse factor, while its human counterpart was named TCF-1α. Since there is a related molecule named TCF-1, to avoid confusion with TCF-1α, both species factors are now called LEF1. Although its predicted MW is 44 kDa, it runs anomalously at 35-55 kDa in SDS-PAGE. LEF1 has restricted expression in adult, being limited to T cells, thymocytes, pre-B cells and NK cells. LEF1 demonstrates sequence-specific (CCTTGG[T/A][T/A]) DNA binding and directs β-catenin to Wnt-responsive genes. Either transcriptional activation or repression may occur on LEF1 target genes, depending upon 1) the cofactors recruited to the LEF1:β-catenin complex, and 2) the phosphorylation state of LEF1. Human LEF1 is 399 amino acids (aa) in length. It contains one DNA-binding HMG-box (aa 298-369), three potential phosphorylation sites, and an N-terminal SUMOylation site at Lys27. There are at least five isoform variants. One utilizes an alternative start site at Met116, a second contains a 47 aa substitution for aa 283-299, and a third combines the previous two variations. A fourth variant shows a deletion of aa 214-241, while a fifth variant combines the afore mentioned deletion of aa 214-241 with a 25 aa substitution for aa 390-399. Over aa 120-280, human LEF1 shares 97% aa sequence identity with mouse LEF1.