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Rabbit Anti-LEF-1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP52338

Product Information

Application	WB, E
Primary Accession	Q9UJU2
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	44201
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human LEF-1
Epitope Specificity	331-399/399
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus. Note=Found in nuclear bodies upon PIASG binding.
SIMILARITY	Belongs to the TCF/LEF family.Contains 1 HMG box DNA-binding domain.
SUBUNIT	Binds the armadillo repeat of CTNNB1 and forms a stable complex. Interacts with EP300, TLE1 and PIASG (By similarity). Binds ALYREF/THOC4, MDFI and MDFIC. Interacts with NLK.
Post-translational modifications	Phosphorylated at Thr-155 and/or Ser-166 by NLK. Phosphorylation by NLK at these sites represses LEF1-mediated transcriptional activation of target genes of the canonical Wnt signaling pathway.
DISEASE	Defects in BRCA2 are a cause of susceptibility to breast cancer (BC). A common malignancy originating from breast epithelial tissue. Breast neoplasms can be distinguished by their histologic pattern. Invasive ductal carcinoma is by far the most common type. Breast cancer is etiologically and genetically heterogeneous. Important genetic factors have been indicated by familial occurrence and bilateral involvement. Mutations at more than one locus can be involved in different families or even in the same case. Defects in BRCA2 are the cause of pancreatic cancer type 2 (PNCA2) [MIM:613347]. It is a malignant neoplasm of the pancreas. Tumors can arise from both the exocrine and endocrine portions of the pancreas, but 95% of them develop from the exocrine portion, including the ductal epithelium, acinar cells, connective tissue, and lymphatic tissue.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a transcription factor belonging to a family of proteins that share homology with the high mobility group protein-1. The protein encoded by this gene can bind to a functionally important site in the T-cell receptor-alpha enhancer, thereby conferring maximal enhancer activity. This transcription factor is involved in the Wnt signaling pathway, and it may function in hair cell differentiation and follicle morphogenesis. Mutations in this gene have been found in somatic sebaceous tumors. This gene has also been linked to other cancers, including androgen-independent prostate cancer. Alternative splicing results in multiple transcript variants. [provided by

RefSeq, Oct 2009].

Additional Information

Gene ID	51176
Other Names	LEF-1; TCF1; TCF7L3; TCF1ALPHA; Lymphoid enhancer-binding factor 1; T cell-specific transcription factor 1-alpha; TCF1-alpha; LEF1
Target/Specificity	Detected in thymus. Not detected in normal colon, but highly expressed in colon cancer biopsies and colon cancer cell lines. Expressed in several pancreatic tumors and weakly expressed in normal pancreatic tissue. Isoforms 1 and 5 are detected in several pancreatic cell lines.
Dilution	WB=1:500-2000,Flow-Cyt=1ug/test,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	LEF1 (HGNC:6551)
Function	Transcription factor that binds DNA in a sequence-specific manner (PubMed:2010090). Participates in the Wnt signaling pathway (By similarity). Activates transcription of target genes in the presence of CTNNB1 and EP300 (By similarity). PIAG antagonizes both Wnt-dependent and Wnt-independent activation by LEF1 (By similarity). TLE1, TLE2, TLE3 and TLE4 repress transactivation mediated by LEF1 and CTNNB1 (PubMed:11266540). Regulates T-cell receptor alpha enhancer function (PubMed:19653274). Required for IL17A expressing gamma-delta T-cell maturation and development, via binding to regulator loci of BLK to modulate expression (By similarity). Acts as a positive regulator of odontoblast differentiation during mesenchymal tooth germ formation, expression is repressed during the bell stage by MSX1-mediated inhibition of CTNNB1 signaling (By similarity). May play a role in hair cell differentiation and follicle morphogenesis (By similarity).
Cellular Location	Nucleus {ECO:0000255|PROSITE-ProRule:PRU00267}. Note=Found in nuclear bodies upon PIASG binding.
Tissue Location	Detected in thymus. Not detected in normal colon, but highly expressed in colon cancer biopsies and colon cancer cell lines. Expressed in several pancreatic tumors and weakly expressed in normal pancreatic tissue. Isoforms 1 and 5 are detected in several pancreatic cell lines.

Background

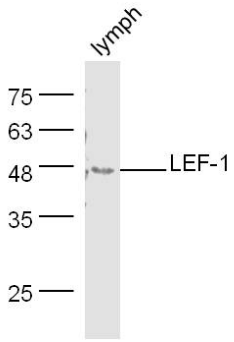
Participates in the Wnt signaling pathway. Activates transcription of target genes in the presence of CTNNB1 and EP300. May play a role in hair cell differentiation and follicle morphogenesis. TLE1, TLE2, TLE3 and TLE4 repress transactivation mediated by LEF1 and CTNNB1. Regulates T-cell receptor alpha enhancer function. Binds DNA in a sequence-specific manner. PIAG antagonizes both Wnt-dependent and Wnt-independent activation by LEF1 (By similarity). Isoform 3 lacks the CTNNB1 interaction domain and may

be an antagonist for Wnt signaling. Isoform 5 transcriptionally activates the fibronectin promoter, binds to and represses transcription from the E-cadherin promoter in a CTNNB1- independent manner, and is involved in reducing cellular aggregation and increasing cell migration of pancreatic cancer cells. Isoform 1 transcriptionally activates MYC and CCND1 expression and enhances proliferation of pancreatic tumor cells.

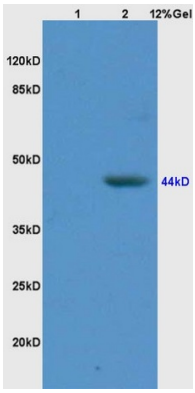
References

Waterman M.L.,et al.Genes Dev. 5:656-669(1991).
Hovanes K.,et al.Nucleic Acids Res. 28:1994-2003(2000).
Jesse S.,et al.Int. J. Cancer 126:1109-1120(2010).
Kobielak A.,et al.Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).

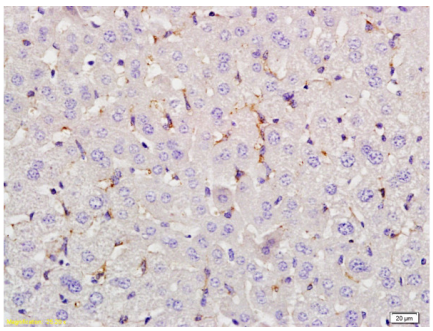
Images



Mouse lymph node lysates probed with Rabbit Anti-LEF-1 Polyclonal Antibody, Unconjugated (AP52338) at 1:300 overnight at 4˚C. Followed by conjugation to secondary antibody at 1:500 for 90 min at 37˚C.

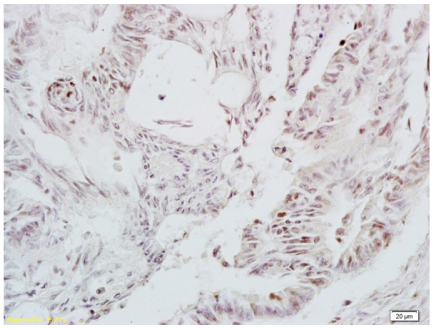


L1 rat brain lysates L2 human colon carcinoma lysates probed with Anti IL-2R gamma/CD132 Polyclonal Antibody, Unconjugated at 1:3000 for 90 min at 37˚C. Predicted band 44kD. Observed band size:44kD.



Formalin-fixed and paraffin embedded rat liver tissue labeled with Anti-LEF-1 Polyclonal Antibody, Unconjugated AP52338 at 1:200 followed by conjugation to the secondary antibody, and DAB staining

Formalin-fixed and paraffin embedded human colon carcinoma tissue labeled with Anti-LEF-1 Polyclonal Antibody, Unconjugated AP52338 at 1:200 followed by conjugation to the secondary antibody and DAB staining



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