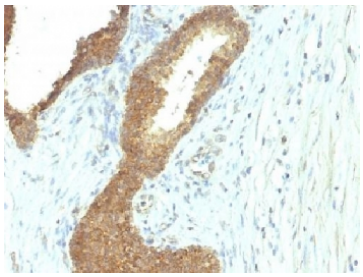
Alkaline Phosphatase Tissue Non Specific Antibody / ALPL IHC Antibody [clone ALPL/597] (V3401)

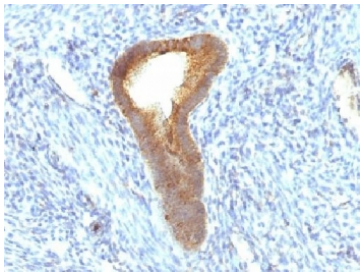
Catalog No.	Formulation	Size
V3401-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3401-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3401SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3401IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

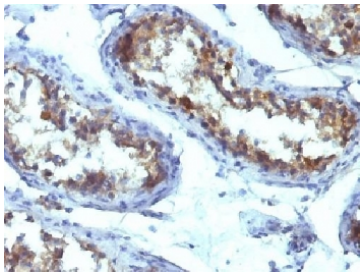
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	ALPL/597
Purity	Protein G affinity chromatography
UniProt	P05186
Localization	Cell surface, cytoplasmic, secreted
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This Alkaline Phosphatase Tissue Non Specific Antibody / ALPL IHC Antibody is available for research use only.



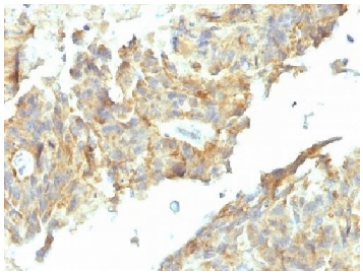
Alkaline Phosphatase Tissue Non Specific Antibody Colon Carcinoma IHC. Immunohistochemistry analysis of FFPE human colon carcinoma tissue stained with Alkaline Phosphatase Tissue Non Specific Antibody (clone ALPL/597). This ALPL IHC antibody demonstrates strong granular cytoplasmic and membranous HRP-DAB brown staining in malignant gland-forming epithelial cells, while surrounding stromal tissue shows minimal background reactivity. The staining profile is consistent with expression of alkaline phosphatase, tissue-nonspecific isozyme / ALPL within differentiated colorectal tumor epithelium. Required HIER: boil tissue sections in 10mM Tris with 1mM EDTA, pH 9, for 10-20 min followed by cooling at RT for 20 min.



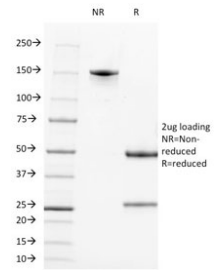
Alkaline Phosphatase Tissue Non Specific Antibody Endometrial Carcinoma IHC. Immunohistochemistry analysis of FFPE human endometrial carcinoma tissue stained with Alkaline Phosphatase Tissue Non Specific Antibody (clone ALPL/597). This ALPL IHC antibody demonstrates strong apical membranous and granular cytoplasmic HRP-DAB brown staining within malignant glandular epithelial cells, while adjacent stromal regions show minimal background signal. The staining pattern is consistent with expression of alkaline phosphatase, tissue-nonspecific isozyme / ALPL in differentiated endometrial tumor epithelium. Required HIER: boil tissue sections in 10mM Tris with 1mM EDTA, pH 9, for 10-20 min followed by cooling at RT for 20 min.



Alkaline Phosphatase Tissue Non Specific Antibody Testicular Carcinoma IHC. Immunohistochemistry analysis of FFPE human testicular carcinoma tissue stained with Alkaline Phosphatase Tissue Non Specific Antibody (clone ALPL/597). This ALPL IHC antibody demonstrates strong membranous and granular cytoplasmic HRP-DAB brown staining within malignant gland-forming epithelial cells, highlighting luminal tumor structures with minimal surrounding stromal background. The staining profile is consistent with expression of alkaline phosphatase, tissue-nonspecific isozyme / ALPL in testicular tumor-associated epithelial compartments. Required HIER: boil tissue sections in 10mM Tris with 1mM EDTA, pH 9, for 10-20 min followed by cooling at RT for 20 min.



Alkaline Phosphatase Tissue Non Specific Antibody Ovarian Carcinoma IHC. Immunohistochemistry analysis of FFPE human ovarian carcinoma tissue stained with Alkaline Phosphatase Tissue Non Specific Antibody (clone ALPL/597). This ALPL IHC antibody demonstrates diffuse cytoplasmic and focal membranous HRP-DAB brown staining throughout malignant epithelial tumor cell populations, with heterogeneous signal intensity across clustered carcinoma regions. The staining pattern is consistent with expression of alkaline phosphatase, tissue-nonspecific isozyme / ALPL in ovarian tumor-associated epithelial compartments. Required HIER: boil tissue sections in 10mM Tris with 1mM EDTA, pH 9, for 10-20 min followed by cooling at RT for 20 min.



SDS-PAGE analysis of purified, BSA-free Alkaline Phosphatase antibody (clone ALPL/597) as confirmation of integrity and purity.

Description

Alkaline phosphatase, tissue-nonspecific isozyme (ALPL) is a membrane-associated ectoenzyme involved in phosphate metabolism, extracellular pyrophosphate hydrolysis, and tissue mineralization processes. ALPL is highly expressed in osteoblasts, liver, kidney, placenta, and select epithelial tissues, where it contributes to skeletal development, phosphate

homeostasis, and cellular differentiation pathways. Alkaline Phosphatase Tissue Non Specific Antibody is useful for investigating ALPL expression patterns in normal tissues and malignancies, particularly in epithelial and glandular tumor contexts where alkaline phosphatase activity may correlate with differentiation state and metabolic adaptation.

ALPL antibody, also referred to as Tissue nonspecific alkaline phosphatase antibody, TNAP antibody, and TNSALP antibody in the literature, recognizes a member of the alkaline phosphatase family encoded on chromosome 1p36.12. The protein is frequently described as liver/bone/kidney alkaline phosphatase because of its strong physiologic expression in these tissue compartments. ALPL localizes primarily to the plasma membrane through a glycosylphosphatidylinositol anchor and functions in dephosphorylation of extracellular substrates involved in mineralization and purinergic signaling. Altered ALPL expression has been associated with osteogenic differentiation programs, tumor metabolism, and epithelial remodeling pathways.

This Alkaline Phosphatase Tissue Non Specific Antibody is uniquely positioned for immunohistochemical evaluation of ALPL-positive epithelial and tumor-associated cellular populations in FFPE tissues. Clone ALPL/597 demonstrates strong utility in human cancer tissue staining applications, including endometrial carcinoma, colon carcinoma, ovarian carcinoma, and testicular tumor specimens. The observed staining patterns support use of this clone in studies examining epithelial differentiation, reproductive tissue biology, glandular tumor phenotypes, and alkaline phosphatase-associated metabolic programs.

ALPL participates in pathways regulating extracellular phosphate balance, hydroxyapatite formation, and matrix mineralization. In developmental biology, ALPL expression is widely used as an indicator of osteoblastic differentiation and stem cell lineage commitment. In oncology research, tissue non-specific alkaline phosphatase has attracted attention because elevated expression may occur in tumors displaying glandular differentiation, stem-like cellular phenotypes, or altered metabolic states. Increased alkaline phosphatase activity has additionally been investigated in relation to tumor progression, metastatic adaptation, and tissue remodeling microenvironments.

Expression of ALPL has been documented in epithelial cells of the gastrointestinal tract, reproductive tissues, kidney, liver, and select stromal populations. In cancer tissue sections, staining may appear membranous, cytoplasmic, or apically accentuated depending on tissue type and differentiation status. Because alkaline phosphatase family members show tissue-restricted distribution patterns, ALPL immunohistochemistry can provide valuable context in studies of epithelial lineage characterization and tumor-associated metabolic heterogeneity.

Clone ALPL/597 antibody supports research applications focused on alkaline phosphatase biology, epithelial differentiation, reproductive system pathology, tumor histology, and phosphatase-associated signaling pathways. The antibody may be incorporated into studies examining cancer progression, developmental regulation, tissue remodeling, and metabolic adaptation in normal and diseased tissues.

Explore additional enzymes and metabolic pathway markers on our Metabolism Antibodies page, including antibodies for phosphate metabolism, mineralization biology, and tumor-associated metabolic regulation.

Application Notes

Optimal dilution of the Alkaline Phosphatase Tissue Non Specific Antibody / ALPL IHC Antibody should be determined by the researcher.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Recombinant human ALPL protein was used as the immunogen for the Alkaline Phosphatase antibody.

Storage

Store the Alkaline Phosphatase antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

ALPL antibody, TNAP antibody, TNSALP antibody, Tissue nonspecific alkaline phosphatase antibody, Liver bone kidney alkaline phosphatase antibody