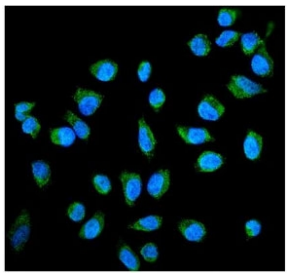
PLAP Antibody / Germ Cell Tumor Marker Antibody (R32610)

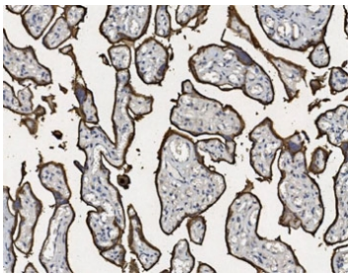
Catalog No.	Formulation	Size
R32610	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

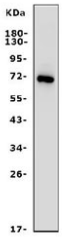
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	P05187
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This PLAP Antibody / Germ Cell Tumor Marker Antibody is available for research use only.



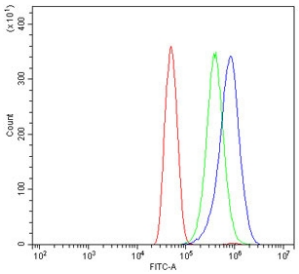
PLAP Antibody HeLa IF. Immunofluorescence analysis of formalin-fixed, paraffin-embedded human HeLa cells stained with PLAP Antibody demonstrates cytoplasmic and membranous fluorescence signal (green) consistent with expression of placental alkaline phosphatase / ALPP in epithelial-derived tumor cells. This germ cell tumor marker antibody highlights peripheral membranous and cytoplasmic localization patterns associated with placental alkaline phosphatase expression in transformed epithelial cell populations. Nuclei are counterstained with DAPI (blue). Heat-induced epitope retrieval was performed by steaming sections in pH 6 citrate buffer for 20 min prior to antibody incubation.



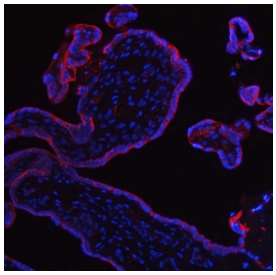
PLAP Antibody Placenta IHC. Immunohistochemistry analysis of FFPE human placenta tissue stained with PLAP Antibody demonstrates strong circumferential membranous HRP-DAB brown staining outlining trophoblast-lined chorionic villi. The staining pattern is consistent with expression of placental alkaline phosphatase / ALPP in syncytiotrophoblast-associated epithelial compartments and highlights the characteristic membrane localization of this germ cell tumor-associated differentiation marker. HIER: steam section in pH8 EDTA buffer for 20 min.



PLAP Antibody Placenta WB. Western blot analysis of human placenta tissue lysate using PLAP Antibody detects a strong band at approximately 65-70 kDa, consistent with placental alkaline phosphatase / ALPP. Although the predicted molecular weight of PLAP is approximately 58 kDa, the protein is routinely visualized at higher apparent molecular weights due to extensive glycosylation and post-translational processing characteristic of this glycosylphosphatidylinositol-anchored alkaline phosphatase family member and germ cell tumor-associated differentiation marker.



PLAP Antibody HeLa FACS. Flow cytometry analysis of human HeLa cells stained with PLAP Antibody demonstrates a distinct right-shifted fluorescence population relative to the isotype control, consistent with cell-associated expression of placental alkaline phosphatase / ALPP in epithelial-derived tumor cells. This germ cell tumor marker antibody supports detection of membrane-associated PLAP expression in transformed cellular populations. Red=cells alone, Green=isotype control, Blue=PLAP antibody.



PLAP Antibody Placenta IF. Immunofluorescence analysis of formalin-fixed, paraffin-embedded human placenta tissue stained with PLAP Antibody demonstrates strong membranous fluorescence signal outlining chorionic villi and syncytiotrophoblast-associated epithelial surfaces (red), consistent with expression and surface localization of placental alkaline phosphatase / ALPP in trophoblastic cellular compartments. This germ cell tumor marker antibody highlights the characteristic membrane distribution of PLAP within placental tissue. Nuclei are counterstained with DAPI (blue). Heat-induced epitope retrieval was performed by steaming sections in pH 8 EDTA buffer for 20 min prior to antibody incubation.

Description

Placental alkaline phosphatase (ALPP), commonly known as PLAP, is a glycosylphosphatidylinositol-anchored membrane glycoprotein belonging to the alkaline phosphatase enzyme family. PLAP is most strongly associated with placental trophoblasts and germ cell tumor biology, where it functions in extracellular phosphomonoester hydrolysis and epithelial differentiation-associated signaling pathways. PLAP Antibody is widely utilized in studies involving germ cell tumors, trophoblastic differentiation, reproductive tissue pathology, and placental epithelial biology.

PLAP antibody, also referred to as Placental alkaline phosphatase antibody and ALPP antibody in the literature, recognizes a tissue-restricted alkaline phosphatase isozyme encoded on chromosome 2q37.1. The protein localizes primarily to the plasma membrane and apical cellular surfaces of trophoblast-associated epithelial populations. Because physiologic expression is relatively restricted compared with other alkaline phosphatase family members, PLAP has become a well-established marker in pathology-focused investigations examining seminoma, germ cell differentiation, and trophoblastic lineage-associated tumors.

This PLAP Antibody is uniquely positioned for studies involving germ cell tumor-associated differentiation pathways and epithelial lineage characterization. Placental alkaline phosphatase expression has historically been linked to seminoma

and related germ cell neoplasms, where membranous and cytoplasmic staining patterns may support identification of tumor-associated epithelial populations. In addition to germ cell tumor biology, PLAP expression is also associated with placental syncytiotrophoblasts and trophoblastic differentiation programs, making the protein useful in reproductive tissue and developmental biology investigations.

PLAP participates in extracellular phosphate metabolism and membrane-associated phosphatase activity, although its greatest research utility has emerged from its role as a differentiation-associated biomarker rather than its enzymatic function alone. The restricted normal tissue distribution of placental alkaline phosphatase contributes to its utility in distinguishing trophoblast-associated and germ cell-associated cellular populations from surrounding non-reactive tissues. This selective expression profile has supported widespread use of PLAP in studies examining tumor lineage identity, epithelial differentiation state, and reproductive tissue-associated malignancies.

Expression of placental alkaline phosphatase has additionally been reported in subsets of epithelial-derived malignancies and oncofetal cellular populations. In tissue sections, PLAP staining frequently appears membranous with variable cytoplasmic enhancement depending on fixation conditions, tissue type, and tumor differentiation status. The protein is commonly associated with seminoma biology, germ cell tumor differentiation, trophoblastic lineage specification, and placental epithelial membrane organization.

PLAP Antibody supports research involving germ cell tumors, seminoma-associated markers, trophoblast differentiation pathways, placental epithelial biology, reproductive tissue pathology, and alkaline phosphatase family signaling mechanisms. The antibody may be incorporated into studies examining epithelial differentiation, tumor lineage characterization, developmental biology, and placental-associated cellular regulation in both normal and diseased tissues.

For a clone-defined placental marker antibody with extensive placenta-positive and normal tissue-negative immunohistochemistry validation data, see our ALPP Antibody / Placental Marker Antibody page featuring clone rALP/870.

Application Notes

Optimal dilution of the PLAP Antibody / Germ Cell Tumor Marker Antibody should be determined by the researcher.

Immunogen

Amino acids 403-433 (KARDRKAYTVLLYGNGPGYVLKDGARPDVTE-human) were used as the immunogen for the PLAP antibody rabbit polyclonal.

Storage

After reconstitution, the PLAP antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

ALPP antibody, Placental alkaline phosphatase antibody, PLAP antibody, Seminoma marker antibody, Trophoblast marker antibody

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