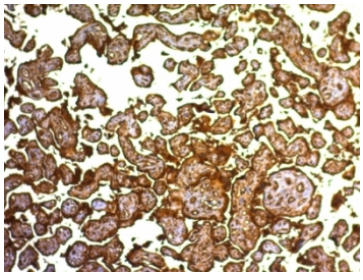
PLAP Antibody Clone SPM593 / Placental Alkaline Phosphatase [clone SPM593] (V2515)

Catalog No.	Formulation	Size
V2515-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2515-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2515SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2515IHC-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 IgG2b, kappa
Clone Name	SPM593
Purity	Protein G affinity chromatography
UniProt	P05187
Localization	Cytoplasmic and cell surface
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This PLAP antibody is available for research use only.



Immunohistochemistry of PLAP Antibody Clone SPM593 in human placenta. Formalin-fixed, paraffin-embedded human placental tissue demonstrates strong HRP-DAB brown membranous staining in syncytiotrophoblastic cells lining chorionic villi, consistent with surface localization of placental alkaline phosphatase. Stromal and intervillous cells show minimal staining.

Description

Placental alkaline phosphatase is a glycosylphosphatidylinositol-anchored membrane enzyme encoded by the ALPP gene and widely known as PLAP. The PLAP Antibody Clone SPM593 is a mouse monoclonal antibody developed to detect this trophoblast-associated alkaline phosphatase in tissue-based research applications. ALPP is located on chromosome 2q37 and belongs to the alkaline phosphatase family of homodimeric metalloenzymes that catalyze the hydrolysis of phosphate monoesters under alkaline conditions.

Physiologically, PLAP is strongly expressed on the apical surface of syncytiotrophoblasts in placental tissue, where it contributes to membrane-associated enzymatic activity at the maternal-fetal interface. Because the enzyme is anchored to the external leaflet of the plasma membrane via a glycosylphosphatidylinositol linkage, immunohistochemical detection typically reveals crisp membranous staining in trophoblastic cells. Expression in most normal adult somatic tissues is limited, which supports its use as a lineage-associated marker in histologic evaluation.

In oncologic research, PLAP expression has been extensively studied in germ cell tumors, particularly seminoma and embryonal carcinoma, as well as in selected trophoblastic neoplasms. Strong membranous and occasional cytoplasmic staining patterns in tumor epithelial cells are characteristic findings in these malignancies. In contrast, most non-germ cell carcinomas demonstrate absent or minimal staining, reinforcing its value in tumor classification studies and differentiation panels.

Although PLAP shares structural similarity with other alkaline phosphatase isoenzymes such as tissue-nonspecific and intestinal alkaline phosphatases, its expression profile is more restricted and lineage-associated. Clone SPM593 is a mouse monoclonal antibody developed for detection of PLAP in tissue specimens, supporting research into trophoblastic biology, germ cell tumor characterization, and membrane-associated enzyme localization.

Application Notes

Optimal dilution of the SPM593 PLAP antibody should be determined by the researcher.

1. No special pretreatment is required for the immunohistochemical staining of formalin-fixed tissues.
2. 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 full-length human ALPP/placental alkaline phosphatase protein was used as the immunogen for the PLAP antibody clone SPM593.

Storage

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