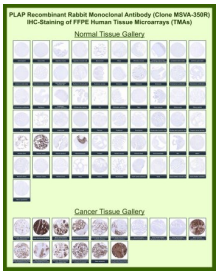
ALPP Antibody for IHC / Alkaline phosphatase placental [clone MSVA-350R] (V6078)

Catalog No.	Formulation	Size
V6078-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6078-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-350R
UniProt	P05187
Localization	Cell membrane
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This ALPP/Alkaline phosphatase placental antibody is available for research use only.



ALPP Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of Alkaline phosphatase placental ALPP in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using recombinant rabbit monoclonal antibody clone MSVA-350R. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates strong membranous localization in placental trophoblastic cells, while most non-trophoblastic normal tissues remain largely negative. Within tumor tissue microarrays, selective positivity is observed in germ cell tumors including seminoma and embryonal carcinoma, supporting lineage-associated expression. Evaluation across large TMA panels enables direct comparison of ALPP expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported expression profiles in the Human Protein Atlas and support its use as a marker of trophoblastic and germ cell differentiation.

Description

Alkaline phosphatase placental is a glycosylphosphatidylinositol-anchored membrane enzyme encoded by the ALPP gene and commonly referred to as placental alkaline phosphatase or PLAP. The ALPP Antibody for IHC is developed to

evaluate tissue distribution and membranous expression of this trophoblast-associated isoenzyme in formalin-fixed, paraffin-embedded specimens. ALPP is located on chromosome 2q37 and belongs to the alkaline phosphatase family of homodimeric metalloenzymes that hydrolyze phosphate monoesters under alkaline conditions.

In normal tissue, placental alkaline phosphatase is strongly expressed on the apical membrane of syncytiotrophoblasts, producing a distinct membranous staining pattern in placental tissue. Outside of pregnancy-associated tissues, ALPP expression is limited, which supports its utility in immunohistochemical panels assessing trophoblastic differentiation. The glycosylphosphatidylinositol anchor localizes the enzyme to the external surface of the plasma membrane, resulting in crisp membranous staining in positive epithelial or trophoblastic cells.

In tumor pathology research, ALPP is widely recognized as a marker of germ cell tumors, particularly seminoma and embryonal carcinoma, as well as certain trophoblastic neoplasms. In these contexts, strong membranous and occasionally cytoplasmic staining is observed in tumor epithelial cells, while most non-germ cell malignancies show minimal or absent staining. This restricted distribution pattern enhances its value in studies examining lineage differentiation and tumor classification within tissue sections.

Although ALPP shares structural similarity with other alkaline phosphatase isoenzymes, including tissue-nonspecific and intestinal alkaline phosphatases, its expression profile is more restricted and lineage-associated. Evaluation of ALPP expression by immunohistochemistry supports research focused on trophoblastic biology, germ cell tumor characterization, and membrane-associated enzyme localization within histologic architecture. Clone MSVA-350R is a recombinant rabbit monoclonal antibody developed for detection of ALPP in tissue-based research applications.

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Application Notes

1. Optimal dilution of the ALPP antibody for IHC should be determined by the researcher.

2. This ALPP/Alkaline phosphatase placental antibody is recombinantly produced by expression in human HEK293 cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

Recombinant full-length human Alkaline phosphatase placental protein was used as the immunogen for the ALPP antibody for IHC.

Storage

ALPP/Alkaline phosphatase placental antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.