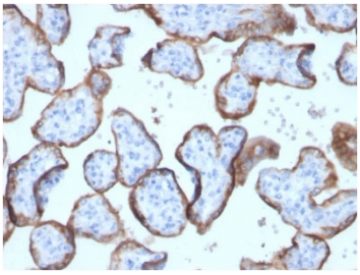
Recombinant Placental Alkaline Phosphatase Antibody [clone ALPP/2899R] (V3993)

Catalog No.	Formulation	Size
V3993-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3993-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3993SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3993IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

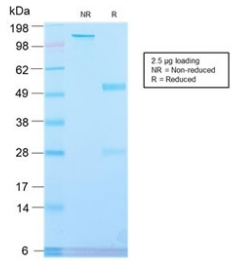
Recombinant RABBIT MONOCLONAL

Bulk quote request

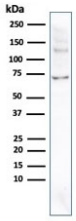
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	ALPP/2899R
Purity	Protein A affinity chromatography
UniProt	P05187
Localization	Cytoplasmic and cell surface
Applications	Immunohistochemistry (FFPE) : 0.25-0.5ug/ml for 30 min at RT Western Blot : 1-2ug/ml
Limitations	This recombinant Placental Alkaline Phosphatase antibody is available for research use only.



Immunohistochemistry of Recombinant Placental Alkaline Phosphatase Antibody (clone ALPP/2899R) in human placenta. Formalin-fixed, paraffin-embedded human placental tissue demonstrates strong HRP-DAB brown membranous staining in syncytiotrophoblastic cells outlining chorionic villi, consistent with surface localization of placental alkaline phosphatase. Stromal cores and intervillous spaces show minimal staining.



SDS-PAGE analysis of purified, BSA-free recombinant Placental Alkaline Phosphatase antibody (clone ALPP/2899R) as confirmation of integrity and purity.



Western blot testing of human JEG-3 cells with recombinant Placental Alkaline Phosphatase antibody (clone ALPP/2899R). Predicted molecular weight ~58 kDa but routinely visualized at 60-70 kDa.

Description

Placental alkaline phosphatase is a glycosylphosphatidylinositol-anchored membrane enzyme encoded by the ALPP gene and widely known as PLAP. The Recombinant Placental Alkaline Phosphatase Antibody (clone ALPP/2899R) is a recombinant rabbit monoclonal antibody developed to detect this trophoblast-associated alkaline phosphatase in tissue-based and protein expression studies. ALPP is located on chromosome 2q37 and belongs to the alkaline phosphatase family of homodimeric metalloenzymes that hydrolyze phosphate monoesters under alkaline conditions.

Physiologically, PLAP is strongly expressed on the apical membrane of syncytiotrophoblasts within placental chorionic villi, where it contributes to membrane-associated enzymatic activity at the maternal-fetal interface. The glycosylphosphatidylinositol anchor localizes the enzyme to the external surface of the plasma membrane, resulting in crisp membranous staining patterns in trophoblastic cells. In most non-placental adult tissues, ALPP expression is limited, supporting its role as a lineage-associated marker in histologic analysis.

In oncologic research, placental alkaline phosphatase expression has been extensively studied in germ cell tumors, particularly seminoma and embryonal carcinoma, as well as in certain trophoblastic neoplasms. Tumor cells in these settings frequently demonstrate strong membranous and occasional cytoplasmic staining, whereas most non-germ cell carcinomas show minimal or absent expression. This restricted distribution enhances its value in panels evaluating germ cell differentiation and trophoblastic lineage markers.

Although PLAP shares structural similarity with tissue-nonspecific and intestinal alkaline phosphatase isoenzymes, its trophoblastic and germ cell-associated expression profile is more defined. Clone ALPP/2899R is a recombinant rabbit monoclonal antibody developed for specific detection of placental alkaline phosphatase in research applications focused on placental biology, tumor classification, and membrane-associated enzyme localization.

Application Notes

Optimal dilution of the recombinant Placental Alkaline Phosphatase 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 full-length human protein was used as the immunogen for the recombinant Placental Alkaline Phosphatase antibody.

Storage

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