Datasheet for 200-4135-0100

Alkaline Phosphatase Antibody

Overview

Description:	Anti-Alkaline Phosphatase (Calf Intestine) (RABBIT) Antibody - 200-4135-0100
Item No.:	200-4135-0100
Size:	100 µg
Applications:	WB, IF, IHC, IP
Reactivity:	Bovine
Host Species:	Rabbit

Product Details

Background:	In most mammals there are four different isozymes: placental, placental-like, intestinal and tissue non-specific (liver/bone/kidney). Alkaline Phosphatase catalytic activity is phosphate monoester + H2O = an alcohol + phosphate.
Synonyms:	rabbit anti-Alkaline Phosphatase Antibody, Alkaline phosphomonoesterase antibody, ALPI antibody, Glycerophosphatase antibody, IAP antibody, Intestinal alkaline phosphatase antibody, Kasahara isozyme antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	ALP1
Reactivity:	Bovine
Immunogen Type:	Native Protein
Immunogen:	Alkaline Phosphatase [Calf Intestine]

Purity/Specificity:	Anti-Alkaline Phosphatase is an IgG fraction antibody purified from monospecific antiserum by a multi-step process which includes delipidation, salt fractionation and ion exchange chromatography followed by extensive dialysis against the buffer stated above. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Rabbit Serum as well as purified and partially purified Alkaline Phosphatase [Calf Intestine]. Cross reactivity against Alkaline Phosphatase from other tissues and species may occur but have not been specifically determined.
Relevant Links:	• 200-4135 SDS • UniProtKB - P19111 • GeneID - 280993

Application Details

Tested Applications:	WB
Suggested Applications:	IF, IHC, IP (Based on references)
Application Note:	Anti-Alkaline Phosphatase has been tested against 1.0 ug of Alkaline Phosphatase [Calf intestine] in a standard ELISA using Peroxidase conjugated Affinity Purified anti-Rabbit IgG [H&L] (Goat) code #611-1302 and (ABTS (2,2'-azino-bis-[3-ethylbenthiazoline-6-sulfonic acid]) code # ABTS-100 as a substrate for 30 minutes at room temperature. A working dilution of 1:2,000 to 1:8,000 of the reconstitution concentration is suggested for this product.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:20,000 - 1:100,000
IHC:	1:1,000 - 1:5,000
WB:	1:2,000 - 1:10,000

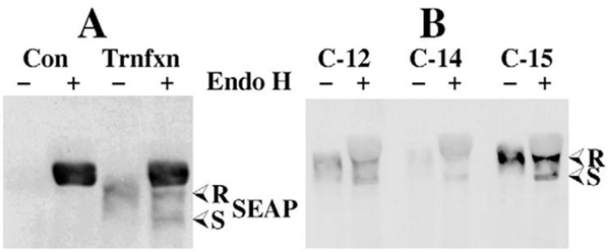
Formulation

Physical State:	Lyophilized
Concentration:	1.0 mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None
Reconstitution Volume:	100 µL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

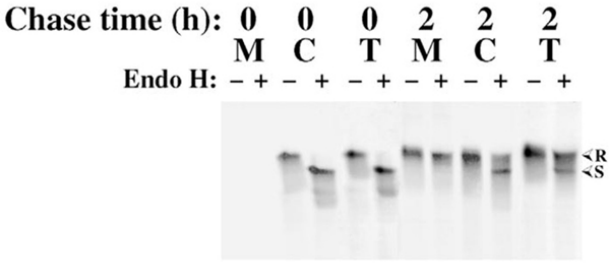
Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

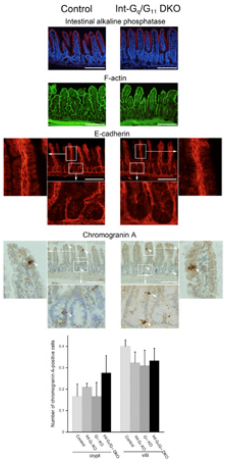
Images



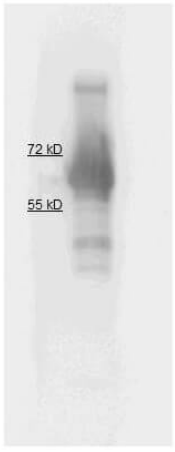
Western Blot
Western blotting of secretory alkaline phosphatase (SEAP) expressed in INS-1 β-cells. (A) A stably transfected clone of INS-1 cells (clone 12, Trnfxn) immunoblotted for alkaline phosphatase next to untransfected control cells (Con). In addition, a faster-migrating specific band is detected in the stably transfected cells. Upon glycan digestion (+), the steady state distribution of SEAP is divided into endo-H-sensitive (S) and endo-H-resistant (R) forms, the latter indicative of a significant Golgi and/or post-Golgi pool of the protein in these cells. (B) A comparison of SEAP expression level in the clone shown in panel A (C-12) to two other independently selected INS-1 clones (C-14 and C-15), each of which maintains a similar proportion of endo-H-resistant SEAP. Fig 1.
PMID: 16608874



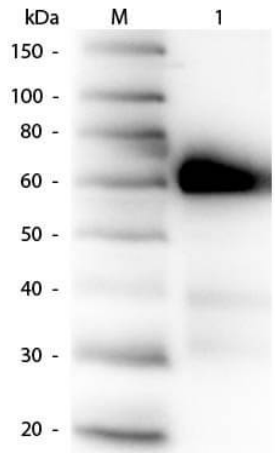
Western Blot
Acquisition of endo H resistance and secretion of SEAP at 2 hours of chase in INS-1 β-cells. Cells were metabolically labeled for 30 minutes and the media (M), cells (C) or total (T, media + cells) were immunoprecipitated with anti-alkaline-phosphatase antibody. At the zero chase time, SEAP had not yet appeared in the medium and all intracellular SEAP was sensitive to digestion with endo H (S). At 2 hours of chase, more than half of labeled SEAP had acquired endo H resistance (R); 35% of labeled SEAP reached the medium (all of which is endo H resistant), and 25% of intracellular SEAP accumulated as an endo-H-resistant form. The data are representative of three experiments. Fig 2.
PMID: 16608874



Immunofluorescence Microscopy
Preservation of enterocytes and enteroendocrine cells and cell polarity in Gαq/11-deficient mice. Immunohistochemical studies were performed for intestinal alkaline phosphatase (enterocyte marker), chromogranin A (endocrine cell marker), F-actin (mainly localized in the subapical membrane), and E-cadherin (localized in the basolateral membrane). No differences were observed between control and Int-Gq/G11 DKO mice. Scale bars: 200 µm. Bottom: Analysis of the number of chromogranin A–positive cells (arrowheads) in crypt and villi in the 4 genotypes. Cell numbers are graphed as the means ± SD (30 crypts and villi/mouse, n = 4 per genotype). Fig 4.
PMID: 28174748



Western Blot
Western Blot of rabbit anti Alkaline Phosphatase antibody Lane 1: Calf intestine Alkaline Phosphatase. Load: ~1.5 µg Block: 5% Blotto 1 hour at 4°C. Primary antibody: diluted to 1:1000 in 5% Blotto overnight at 4°C. Secondary antibody: Goat anti Rabbit 611-103-122 Lot#21231 1:20,000 in MB-070 1 Hour 4°C Substrate: Femtomax 110.



Western Blot
Western Blot of Rabbit anti-Alkaline Phosphatase (Calf Intestine) Antibody. Lane 1: Alkaline Phosphatase (Calf Intestine). Load: 50 ng per lane. Primary antibody: Rabbit anti-Alkaline Phosphatase (Calf Intestine) Antibody at 1:1,000 overnight at 4°C. Secondary antibody: HRP rabbit secondary antibody (p/n 611-103-122) at 1:40,000 for 30 min at RT. Block: (p/n MB-070) for 30 min at RT.

References

- Iwaki A. et al. Loss of Rab6a in the small intestine causes lipid accumulation and epithelial cell death from lactation. *FASEB J.* (2020)
- Jones et al. Cellular Plasticity of Defa4Cre-Expressing Paneth Cells in Response to Notch Activation and Intestinal Injury. *Cellular and Molecular Gastroenterology and Hepatology* (2018)
- Teoh JJ et al. BIG1 is required for the survival of deep layer neurons, neuronal polarity, and the formation of axonal tracts between the thalamus and neocortex in developing brain. *PLoS One.* (2017)
- Watanabe N et al. Requirement of Gαq/Gα11 signaling in the preservation of mouse intestinal epithelial homeostasis. *Cell Mol Gastroenterol Hepatol.* (2016)
- Sobajima, T et al. Rab11a is required for apical protein localisation in the intestine. *Biology Open* (2014)
- Paladino S et al. Golgi sorting regulates organization and activity of GPI proteins at apical membranes. *Nat Chem Biol.* (2014)
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