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Anti-ALPK1 Antibody

Catalog # AP60840

Product Information

Application	WB, IHC, IF/IC
Primary Accession	Q96QP1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	138861

Additional Information

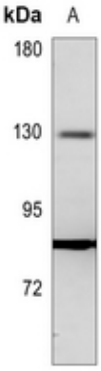
Gene ID	80216
Other Names	KIAA1527; LAK; Alpha-protein kinase 1; Chromosome 4 kinase; Lymphocyte alpha-protein kinase
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the N-term region of human ALPK1. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/2000), IHC (1/50 - 1/200), IF/IC (1/50 - 1/100) IHC~~WB (1/500 - 1/2000), IHC (1/50 - 1/200), IF/IC (1/50 - 1/100) IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

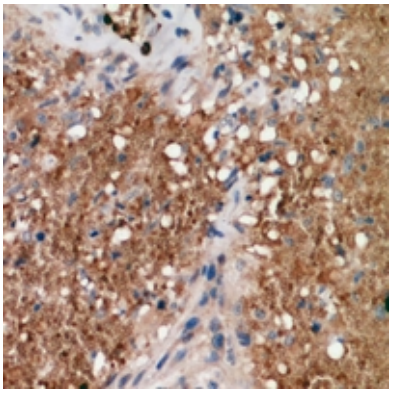
Name	ALPK1 {ECO:0000303|PubMed:30111836, ECO:0000312|HGNC:HGNC:20917}
Function	Serine/threonine-protein kinase that detects bacterial pathogen-associated molecular pattern metabolites (PAMPs) and initiates an innate immune response, a critical step for pathogen elimination and engagement of adaptive immunity (PubMed:28222186, PubMed:28877472, PubMed:30111836). Specifically recognizes and binds ADP-D-glycero-beta- D-manno-heptose (ADP-Heptose), a potent PAMP present in all Gram- negative and some Gram-positive bacteria (PubMed:30111836). ADP- Heptose-binding stimulates its kinase activity to phosphorylate and activate TIFA, triggering pro-inflammatory NF-kappa-B signaling (PubMed:30111836, PubMed:35868845, PubMed:38060563). May be involved in monosodium urate monohydrate (MSU)-induced inflammation by mediating phosphorylation of unconventional myosin MYO9A (PubMed:27169898). May also play a role in apical protein transport by mediating phosphorylation of

	unconventional myosin MYO1A (PubMed:15883161). May play a role in ciliogenesis (PubMed:30967659).
Cellular Location	Cytoplasm, cytosol. Cytoplasm, cytoskeleton, spindle pole Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cell projection, cilium. Note=Localized at the base of primary cilia.
Tissue Location	Highly expressed in liver. Expressed in the optic nerve and retinal pigmented epithelium. Lower expression is observed in the macula and extramacular retina (PubMed:30967659)

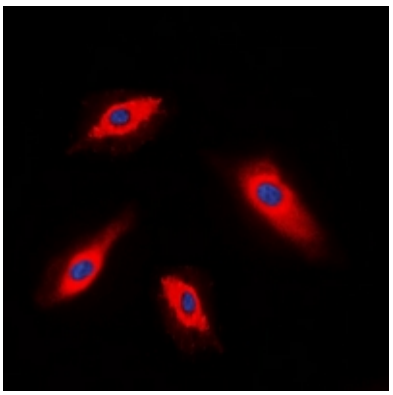
Images



Western blot analysis of ALPK1 expression in HEK293T (A) whole cell lysates. (Predicted band size: 138 kD; Observed band size: 130 kD)

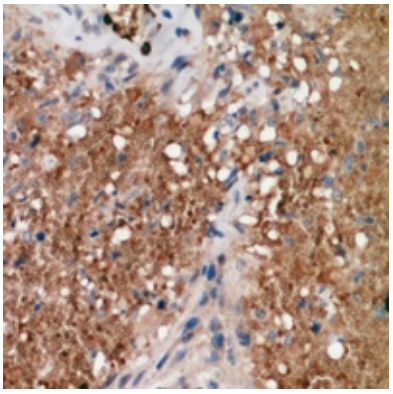


Immunohistochemical analysis of ALPK1 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of ALPK1 staining in HepG2 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

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compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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