

Datasheet for 100-4163**Phospho Enol Pyruvate Carboxylase Antibody****Overview**

Description:	Anti-Phospho Enol Pyruvate Carboxylase(RABBIT) Antibody - 100-4163
Item No.:	100-4163
Size:	2 mL
Applications:	WB
Reactivity:	Maize
Host Species:	Rabbit

Product Details

Background:	Phosphoenolpyruvate Carboxylase, through the carboxylation of phosphoenolpyruvate (PEP), forms an oxaloacetate, a four-carbon dicarboxylic acid source for the tricarboxylic acid cycle. Phospho-enol-pyruvate Carboxylase enzyme is regulated by light-reversible phosphorylation. This protein is involved in the pathway C3 acid pathway, which is part of Photosynthesis.
Synonyms:	rabbit anti-Phospho Enol Pyruvate Carboxylase Antibody, PEPC 1 antibody, PEPCase 1 antibody, Phosphoenolpyruvate carboxylase 1 antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	pepc
Reactivity:	Maize
Immunogen Type:	Native Protein
Immunogen:	Phospho-enol-pyruvate Carboxylase [Maize Leaves]

Purity/Specificity: This product was prepared from monospecific antiserum by a delipidation and defibrination. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-rabbit serum, purified and partially purified Phospho-enol-pyruvate Carboxylase [Maize Leaves]. Cross reactivity against Phospho-enol-pyruvate Carboxylase from other tissues and species may occur but have not been specifically determined.

Relevant Links:

- [UniProtKB - B8XPZ2](#)
- [NCBI - ACN80021.1](#)
- [GeneID - 542372](#)

Application Details

Tested Applications:	WB
Application Note:	Anti-Phosphoenolpyruvate Carboxylase antibody has been tested in western blotting. Specific conditions for reactivity should be optimized by the end user. This antibody is suitable in ELISA and immunohistochemistry.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:30,000 - 1:160,000
IHC:	User Optimized
WB:	1:5,000 - 1:20,000

Formulation

Physical State:	Lyophilized
Concentration:	85 mg/mL by Refractometry
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:	2.0 mL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

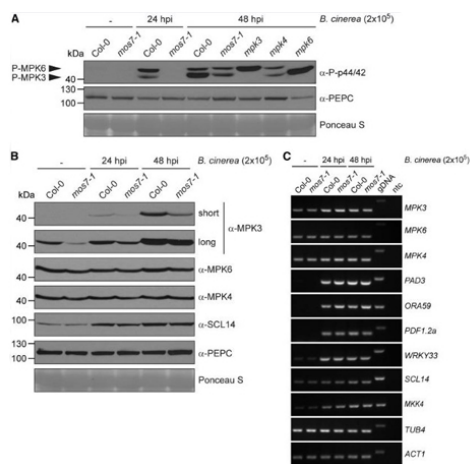
Shipping & Handling

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.

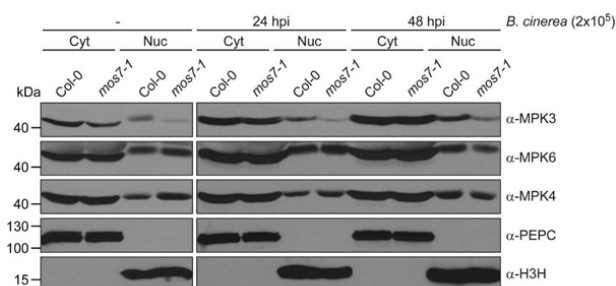
Expiration: Expiration date is one (1) year from date of receipt.

Images



Western Blot

mos7-1 mutants show reduced levels of activated MPK3 and MPK6 upon *B. cinerea* infection and are selectively impaired in MPK3 protein accumulation. A, Immunoblot analysis of activated MPK3 and MPK6 in total protein extracts derived from 5-week-old unchallenged (-) *Col-0* and *mos7-1* leaf tissues and leaf tissues harvested 24 and 48 h after spray inoculation with *B. cinerea* spore suspension (2 x 10⁵ spores mL⁻¹). *mpk3*, *mpk4* (in ecotype Landsberg erecta), and *mpk6* were included as controls. Equal loading was monitored by probing the membrane with a PEPC-specific antibody and Ponceau S staining. The experiment was repeated twice with similar results. B, Immunoblot analysis as in A using antibodies raised against the indicated proteins. For MPK3, two exposure times are shown. Ponceau S staining of the membrane was used to show equal loading. Similar results were obtained in three independent experiments. C, RT-PCR analyses of total RNAs extracted from unchallenged *Col-0* and *mos7-1* leaf tissues and leaf tissues harvested 24 and 48 h after spray inoculation with *B. cinerea* spore suspension (2 x 10⁵ spores mL⁻¹). Transcripts of all indicated genes were amplified by 29 cycles of PCR using equal amounts of cDNA. PCR products were analyzed by agarose gel electrophoresis and ethidium bromide staining. ACTIN1 and TUBULIN4 expression were used as controls. Similar results were obtained in three independent experiments. ntc, No template control. Fig 2. PMID: 27591188.



Western Blot

Nuclear accumulation of MPK3 is severely impaired in mos7-1. Immunoblot analyses are shown for the indicated proteins in cytoplasmic (Cyt) and nuclear (Nuc) fractions of 5-week-old unchallenged (–) Col-0 and mos7-1 leaf tissues and leaf tissues harvested 24 and 48 h after spray inoculation with *B. cinerea* spore suspension (2×10^5 spores mL⁻¹). Anti-PEPC and anti-histone H3 were used as cytoplasmic and nuclear markers, respectively, and to monitor equal loading. Similar results were obtained in three independent experiments. Fig 3. PMID: 27591188.

References

- Kim SC et al. Phospholipase D δ and phosphatidic acid mediate heat-induced nuclear localization of glyceraldehyde-3-phosphate dehydrogenase in Arabidopsis. *Plant J.* (2022)
- Kim SC et al. Nuclear moonlighting of cytosolic glyceraldehyde-3-phosphate dehydrogenase regulates Arabidopsis response to heat stress. *Nat Commun.* (2020)
- Genenncher et al. Nucleoporin-Regulated MAP Kinase Signaling in Immunity to a Necrotrophic Fungal Pathogen. *Plant Physiology* (2016)
- Bigeard J et al. Proteomic and phosphoproteomic analyses of chromatin-associated proteins from Arabidopsis thaliana. *Proteomics.* (2014)
- Tameling WIL et al. RanGAP2 mediates nucleocytoplasmic partitioning of the NB-LRR immune receptor Rx in the Solanaceae, thereby dictating Rx function. *Plant Cell.* (2010)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.