

**Germinal Center Kinase (GCK/MAP4K2) Antibody (Center)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP7065b**

**Specification**

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**Germinal Center Kinase (GCK/MAP4K2) Antibody (Center) - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | IHC-P, WB,E            |
| Primary Accession | <a href="#">O12851</a> |
| Reactivity        | Human, Mouse           |
| Host              | Rabbit                 |
| Clonality         | Polyclonal             |
| Isotype           | Rabbit IgG             |
| Calculated MW     | 91556                  |
| Antigen Region    | 288-319                |

**Germinal Center Kinase (GCK/MAP4K2) Antibody (Center) - Additional Information**

**Gene ID** 5871

**Other Names**

Mitogen-activated protein kinase kinase kinase kinase 2, B lymphocyte serine/threonine-protein kinase, Germinal center kinase, GC kinase, MAPK/ERK kinase kinase kinase 2, MEK kinase kinase 2, MEKKK 2, Rab8-interacting protein, MAP4K2, GCK, RAB8IP

**Target/Specificity**

This Germinal Center Kinase (GCK/MAP4K2) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 288-319 amino acids from the Central region of human Germinal Center Kinase (GCK/MAP4K2).

**Dilution**

IHC-P~~1:50~100

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Germinal Center Kinase (GCK/MAP4K2) Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

**Germinal Center Kinase (GCK/MAP4K2) Antibody (Center) - Protein Information**

**Name** MAP4K2 ([HGNC:6864](#))

**Synonyms** GCK, RAB8IP

**Function** Serine/threonine-protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Acts as a MAPK kinase kinase (MAP4K) and is an upstream activator of the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway and to a lesser extent of the p38 MAPKs signaling pathway. Required for the efficient activation of JNKs by TRAF6- dependent stimuli, including pathogen-associated molecular patterns (PAMPs) such as polyinosine-polycytidine (poly(IC)), lipopolysaccharides (LPS), lipid A, peptidoglycan (PGN), or bacterial flagellin. To a lesser degree, IL-1 and engagement of CD40 also stimulate MAP4K2-mediated JNKs activation. The requirement for MAP4K2/GCK is most pronounced for LPS signaling, and extends to LPS stimulation of c-Jun phosphorylation and induction of IL-8. Enhances MAP3K1 oligomerization, which may relieve N-terminal mediated MAP3K1 autoinhibition and lead to activation following autophosphorylation. Also mediates the SAP/JNK signaling pathway and the p38 MAPKs signaling pathway through activation of the MAP3Ks MAP3K10/MLK2 and MAP3K11/MLK3. May play a role in the regulation of vesicle targeting or fusion. regulation of vesicle targeting or fusion. Activator of the Hippo signaling pathway which plays a pivotal role in organ size control and tumor suppression by restricting proliferation and promoting apoptosis. MAP4Ks act in parallel to and are partially redundant with STK3/MST2 and STK4/MST2 in the phosphorylation and activation of LATS1/2, and establish MAP4Ks as components of the expanded Hippo pathway (PubMed:[26437443](#)).

**Cellular Location**

Cytoplasm. Basolateral cell membrane; Peripheral membrane protein Golgi apparatus membrane; Peripheral membrane protein

**Tissue Location**

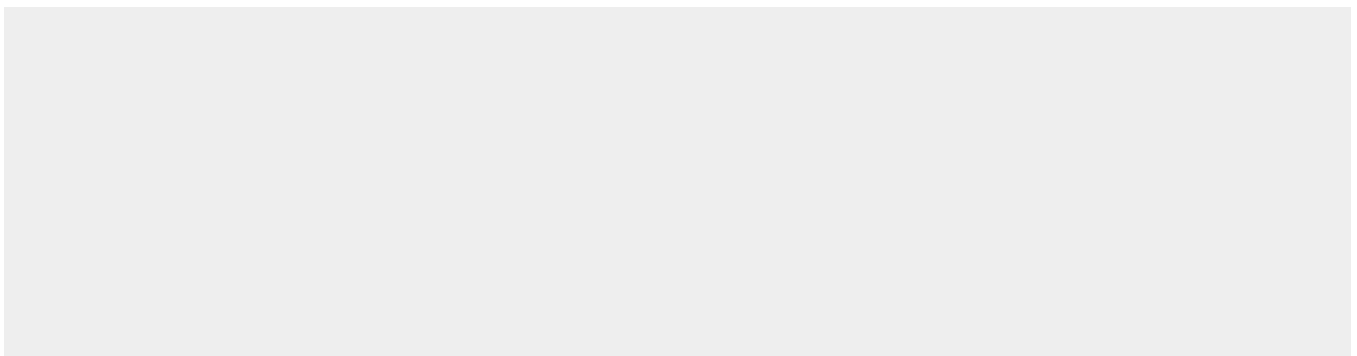
Highly expressed in germinal center but not mantle zone B-cells. Also expressed in lung, brain and placenta and at lower levels in other tissues examined.

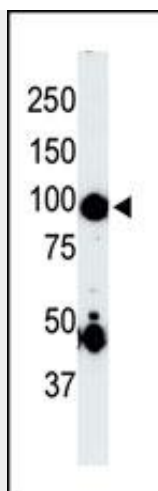
**Germinal Center Kinase (GCK/MAP4K2) Antibody (Center) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

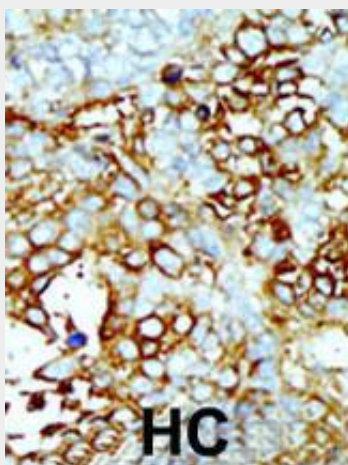
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Germinal Center Kinase (GCK/MAP4K2) Antibody (Center) - Images**





The anti-MAP4K2 Pab (Cat. #AP7065b) is used in Western blot to detect MAP4K2 in mouse skeletal muscle tissue lysate.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

#### **Germinal Center Kinase (GCK/MAP4K2) Antibody (Center) - Background**

The protein encoded by this gene is a member of the serine/threonine protein kinase family. Although this kinase is found in many tissues, its expression in lymphoid follicles is restricted to the cells of germinal centre, where it may participate in B-cell differentiation. This kinase can be activated by TNF-alpha, and has been shown to specifically activate MAP kinases. This kinase is also found to interact with TNF receptor-associated factor 2 (TRAF2), which is involved in the activation of MAP3K1/MEKK1.

#### **Germinal Center Kinase (GCK/MAP4K2) Antibody (Center) - References**

Chadee, D.N., et al., *Mol. Cell. Biol.* 22(3):737-749 (2002).  
Katz, P., et al., *J. Biol. Chem.* 269(24):16802-16809 (1994).