

## Basic Information

<b>Product Name</b>	Anti-CAMKK2 Antibody
<b>Gene Name</b>	CAMKK2
<b>Source</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG
<b>Species Reactivity</b>	human, mouse, rat
<b>Tested Application</b>	WB, IHC, IF, ICC/IF, FCM, ELISA
<b>Contents</b>	500 ug/ml antibody with PBS, 0.02% NaN <sub>3</sub> , 1 mg BSA and 50% glycerol.
<b>Immunogen</b>	E.coli-derived human CAMKK2 recombinant protein (Position: M1-G349).
<b>Concentration</b>	500 ug/ml
<b>Purification</b>	Immunogen affinity purified.
<b>Observed MW</b>	65 kDa
<b>Dilution Ratios</b>	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 Immunofluorescence (IF): 1:50-400 Immunocytochemistry/Immunofluorescence (ICC/IF): 1:50-400 Flow Cytometry (Fixed): 1:50-200 Enzyme linked immunosorbent assay (ELISA): 1:100-1000 (Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.

## Storage

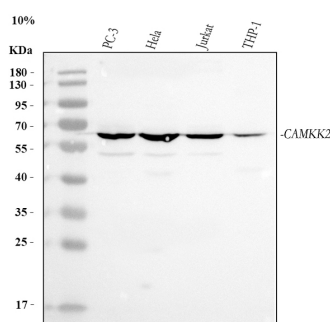
12 months from date of receipt, -20°C as supplied.

## Background Information

CAMKK2, Calcium/calmodulin-dependent protein kinase kinase 2, is an enzyme that in humans is encoded by the CAMKK2 gene. The product of this gene belongs to the serine/threonine-specific protein kinase family, and to the Ca<sup>++</sup>/calmodulin-dependent protein kinase subfamily. This protein plays a role in the calcium/calmodulin-dependent (CaM) kinase cascade by phosphorylating the downstream kinases CaMK1 and CaMK4. CaMKK2 regulates production of the appetite stimulating hormone neuropeptide Y and functions as an AMPK kinase in the hypothalamus. It

also has an important role in the development of hyperalgesia and tolerance to opioid analgesic drugs, through reduction in downstream signalling pathways and mu opioid receptor downregulation. Inhibition of CaMKK2 in mice reduces appetite and promotes weight loss.

## Selected Validation Data



Western blot analysis of CAMKK2 using anti-CAMKK2 antibody (A03048). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human PC-3 whole cell lysates,

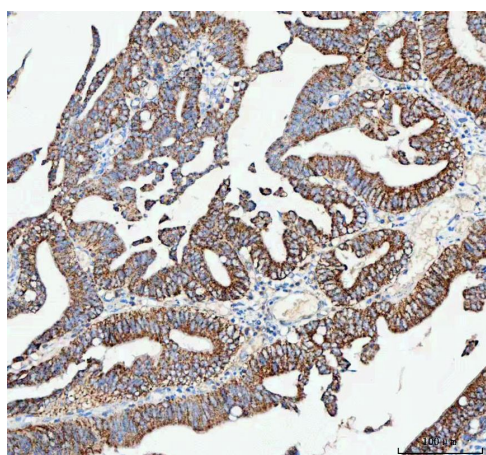
Lane 2: human Hela whole cell lysates,

Lane 3: human Jurkat whole cell lysates,

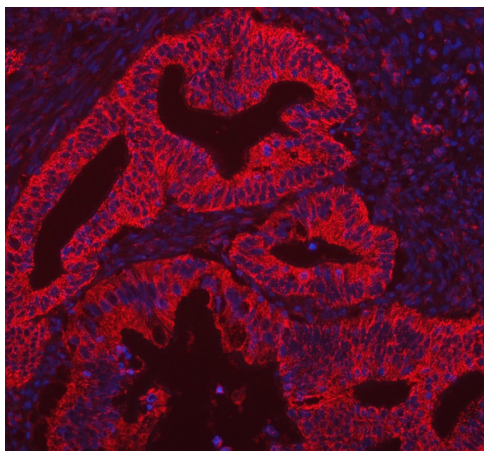
Lane 4: human THP-1 whole cell lysates.

After electrophoresis, proteins were transferred to a membrane.

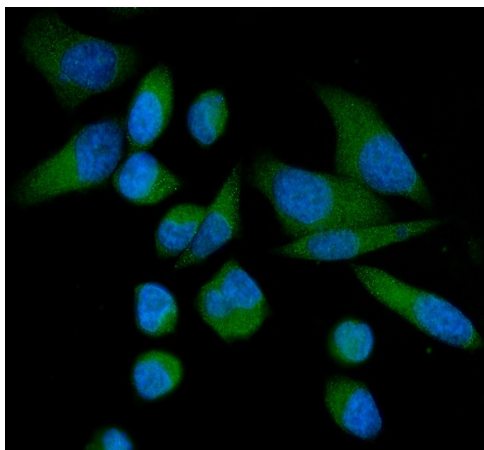
Then the membrane was incubated with rabbit anti-CAMKK2 antigen affinity purified polyclonal antibody (A03048) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for CAMKK2 at approximately 65 kDa. The expected band size for CAMKK2 is at 65 kDa.



IHC analysis of CAMKK2 using anti-CAMKK2 antibody (A03048). CAMKK2 was detected in a paraffin-embedded section of human colorectal adenocarcinoma tissue. The tissue section was incubated with rabbit anti-CAMKK2 Antibody (A03048) at a dilution of 1:200 and developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB (Catalog # AR1027) as the chromogen.



IF analysis of CAMKK2 using anti-CAMKK2 antibody (A03048). CAMKK2 was detected in a paraffin-embedded section of human intestinal cancer tissue. The tissue section was incubated with rabbit anti-CAMKK2 Antibody (A03048) at a dilution of 1:100. Cy3-conjugated Anti-rabbit IgG Secondary Antibody (red)(Catalog#BA1032) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).



ICC/IF analysis of CAMKK2 using anti-CAMKK2 antibody (A03048). CAMKK2 was detected in an immunocytochemical section of PC-3 cells. The section was incubated with rabbit anti-CAMKK2 Antibody (A03048) at a dilution of 1:100. Fluoro488-conjugated Anti-rabbit IgG Secondary Antibody (green)(Catalog#BA1127) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).