

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                     |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human LKB1/STK11 in direct ELISAs and Western blots.                              |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Sheep IgG                                                                      |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                                 |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human LKB1/STK11<br>Met1-Gln433<br>Accession # Q15831 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 488<br>Excitation Wavelength: 488 nm<br>Emission Wavelength: 515-545 nm       |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                              |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                           |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Knockout Validated</b>   | Optimal dilution of this antibody should be experimentally determined. |
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

LKB1 (Liver kinase B1; also STK11/Ser/Thr-protein kinase 11 and NY-REN19) is a 55 kDa intracellular member of the LKB1 subfamily, CAMK Ser/Thr protein kinase family of molecules. It is widely expressed, being particularly investigated in small intestinal columnar epithelium and hepatocytes. STK11 is associated with a wide variety of functions, including the initiation of apoptosis through binding to p53, the regulation of TGF-β signaling through the creation of a SMAD4-LIP1-STK11 complex, and the generation of an epithelial polarized phenotype via cytoskeletal remodeling. Schematically, it would appear that STK11 acts, at least in part, through its ability to phosphorylate multiple AMPK-related kinases, as well as AMPK itself. Human STK11 is 433 amino acids (aa) in length. It potentially contains a three aa propeptide at its C-terminus. The mature segment (aa 1-430) possesses one large protein kinase domain (aa 49-309) plus at least four utilized phosphorylation sites. Phosphorylation on Ser428 promotes the ability of LKB1 to suppress G361 cell growth. Palmitoylation is suggested to occur on Cys418. There are three alternative splice variants. Either individually or in combination, they involve an insertion of nine aa after Tyr126 and a 34 aa substitution for aa 371-433. Full-length human STK11 shares 90% aa sequence identity with mouse STK11.

## PRODUCT SPECIFIC NOTICES

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