

#### DESCRIPTION

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|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human/Mouse/Rat                                                                                                                                                                                                                                                             |
| <b>Specificity</b>        | Detects human PKM2 in direct ELISAs. Detects human, mouse and rat PKM1/2 in Western blot.                                                                                                                                                                                   |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2B</sub> Clone # 945131                                                                                                                                                                                                                           |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human PKM2<br>Ser2-Pro531<br>Accession # P14618-1                                                                                                                                                                                       |
| <b>Conjugate</b>          | Alexa Fluor 350<br>Excitation Wavelength: 346 nm<br>Emission Wavelength: 442 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.

**Western Blot** 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

PKM2 (Pyruvate Kinase isoenzyme M2; also p58, OIP3, THBP1 and CTHBP) is a 58-60 kDa member of the PK family of enzymes. It is widely expressed, being found both intracellularly and in blood, and represents the more common splice variant of the PKM gene. PKM2 generates ATP and pyruvate by catalyzing the transfer of a phosphoryl group from PEP to ADP. Thus, when active, PKM2 promotes energy production and glycolysis. PKM2 exists as a marginally active monomer, with full activity achieved through homotetramerization. Notably, in tumor cells, select oncogenes appear to induce PKM2 homodimerization which limits PKM2 activity. PKM2 is known to be regulated by the binding of T3 and Fru-1,6-bisP. Human PKM2 is 531 amino acids (aa) in length. It contains a catalytic region (aa 43-527) plus four utilized Ser/Thr and Tyr phosphorylation sites, respectively. PKM1 is another PKM gene splice variant that shows a 45 aa substitution for aa 389-433 of PKM2. This variant shows limited expression (striated muscle) and hyperbolic Michaelis-Menten kinetics. There are additional isoform variants of PKM2 that show either a deletion of aa 59-132, or a 67 aa substitution for aa 1-82. Over aa 434-531, human PKM2 shares 95% aa sequence identity with mouse PKM2.

#### PRODUCT SPECIFIC NOTICES

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