



# Recombinant Protein Technical Manual

## Recombinant Human PKM2 Protein (His Tag)

RPES4684

### Product Data:

**Product SKU:** RPES4684

**Size:** 10µg

**Species:** Human

**Expression host:** E. coli

**Uniprot:** P14618

### Protein Information:

**Molecular Mass:** 60.1 kDa

**AP Molecular Mass:** 60 kDa

**Tag:** N-His

**Bio-activity:**

**Purity:** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin:**

**Storage:** Supplied as a 0.2 µm filtered solution of PBS, pH7.0, 10% glycerol.

**Shipping:**

**Formulation:**

**Reconstitution:**

**Application:**

**Synonyms:** CTHBP;HEL-S-30;OIP3;PK3;PKM2;TCB;THBP1

## Immunogen Information:

**Sequence:** Ser2-Pro531

## Background:

Pyruvate kinase isozymes M2 also known as pyruvate kinase muscle isozyme 2 (PKM2), pyruvate kinase type K, cytosolic thyroid hormone-binding protein (CTHBP), thyroid hormone-binding protein 1 (THBP1), or opa-interacting protein 3 (OIP3), is an isoenzyme of the glycolytic enzyme pyruvate kinase. Pyruvate kinase isozymes M2 / PKM2 is a protein involved in glycolysis. The encoded protein is a pyruvate kinase that catalyzes the transfer of a phosphoryl group from phosphoenolpyruvate to ADP, generating ATP and pyruvate. PKM2 has been shown to interact with thyroid hormone and may mediate cellular metabolic effects induced by thyroid hormones. PKM2 has been found to bind Opa protein, a bacterial outer membrane protein involved in gonococcal adherence to and invasion of human cells, suggesting a role of this protein in bacterial pathogenesis. Several alternatively spliced transcript variants encoding a few distinct isoforms have been reported. PKM2 functions as a glycolytic enzyme that catalyzes the transfer of a phosphoryl group from phosphoenolpyruvate (PEP) to ADP, generating ATP. PKM2 may stimulate POU5F1-mediated transcriptional activation. This protein plays a general role in caspase independent cell death of tumor cells. The ratio between the highly active tetrameric form and nearly inactive dimeric form determines whether glucose carbons are channeled to biosynthetic processes or used for glycolytic ATP production. The transition between the 2 forms of PKM2 contributes to the control of glycolysis and is important for tumor cell proliferation and survival.