



# Recombinant Protein Technical Manual

## Recombinant Human CSNK2A1/CK2A1 Protein (GST Tag)(Active)

RPES2963

### Product Data:

**Product SKU:** RPES2963

**Size:** 20µg

**Species:** Human

**Expression host:** Baculovirus-Insect Cells

**Uniprot:** NP\_808227.1

### Protein Information:

**Molecular Mass:** 71.4 kDa

**AP Molecular Mass:** 65 kDa

**Tag:** N-GST

**Bio-activity:** The specific activity was determined to be 9 nmol/min/mg using casein as substrate.

**Purity:** > 93 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.

**Shipping:** This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < -20°C.

**Formulation:** Supplied as sterile 50mM Tris, 100mM NaCl, 0.5mM PMSF, 0.5mM GSH, pH 8.0

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** CK2A1;CKII;CSNK2A3

## Immunogen Information:

**Sequence:** Met 1-Gln 391

## Background:

Casein kinase II subunit alpha, also known as CK II alpha, CSNK2A1 and CK2A1, is a member of the protein kinase superfamily, Ser / Thr protein kinase family and CK2 subfamily. Casein kinase II (CSNK2A1) is a serine / threonine protein kinase that phosphorylates acidic proteins such as casein. This kinase is composed of an alpha, an alpha-prime, and two beta subunits. The alpha subunits contain the catalytic activity while the beta subunits undergo autophosphorylation. Casein kinase II (CSNK2A1) is a constitutively active, ubiquitously expressed serine / threonine protein kinase that is thought to have a regulatory function in cell proliferation, cell differentiation and apoptosis. CSNK2A1 functions as a tetrameric complex consisting of two regulatory beta-subunits and two catalytic units (alpha and alpha') in a homomeric or heteromeric conformation. Whilst the alpha- and alpha'-subunits are catalytically identical, proteins that regulate CSNK2A1, such as cdc2 and Hsp90, preferentially bind to the alpha and not the alpha'-subunit. CSNK2A1 can phosphorylate a number of key intracellular signaling proteins implicated in tumor suppression (p53 and PTEN) and tumorigenesis (myc, jun, NF-kappaB). CSNK2A1 is also thought to influence Wnt signaling via beta-catenin phosphorylation and the PI 3-K signaling pathway via the phosphorylation of Akt.