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# Product datasheet for TP305202

## CAMK2A (NM_171825) Human Recombinant Protein

### Product data:

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|---|---|
| **Product Type:** | Recombinant Proteins |
| **Description:** | Recombinant protein of human calcium/calmodulin-dependent protein kinase II alpha (CAMK2A), transcript variant 2, 20 µg |
| **Species:** | Human |
| **Expression Host:** | HEK293T |
| **Expression cDNA Clone or AA Sequence:** | >RC205202 protein sequence<br>Red=Cloning site Green=Tags(s)<br><br>MATITCTRFTEEYQLFEELGKGAFSVVRRCVKVLAGQEYAAKIINTKKLSARDHQKLEREARICRLLKHP<br>NIVRLHDSISEEGHHYLIFDLVTGGELFEDIVAREYYSEADASHCIQQILEAVLHCHQMGVVHRDLKPEN<br>LLLASKLKGAAVKLADFGLAIEVEGEQQAWFGFAGTPGYLSPEVLRKDPYGKPVDLWACGVILYILLVGY<br>PPFWDEDQHRLYKQIKAGAYDFPSPEWDTVTPEAKDLINKMLTINPSKRITAAEALKHPWISHRSTVASC<br>MHRQETVDCLKKFNARRKLKGAILTTMLATRNFSGGKSGGNKKSDGVKESSESTNTTIEDEDTKVRKQEI<br>IKVTEQLIEAISNGDFESYTKMCDPGMTAFEPEALGNLVEGLDFHRFYFENLWSRNSKPVHTTILNPHIH<br>LMGDESACIAYIRITQYLDAGGIPRTAQSEETRVWHRRDGKWQIVHFHRSGAPSVLPH<br><br>TRTRPLEQKLISEEDLAANDILDYKDDDDKV |
| **Tag:** | C-Myc/DDK |
| **Predicted MW:** | 53.9 kDa |
| **Concentration:** | >0.05 µg/µL as determined by microplate BCA method |
| **Purity:** | > 80% as determined by SDS-PAGE and Coomassie blue staining |
| **Buffer:** | 25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol |
| **Preparation:** | Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps. |
| **Note:** | For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process. |
| **Storage:** | Store at -80°C. |
| **Stability:** | Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles. |

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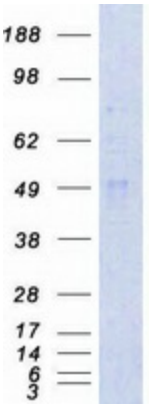
| **RefSeq:** | NP_741960 |
| **Locus ID:** | 815 |
| **UniProt ID:** | Q9UQM7 |
| **RefSeq Size:** | 4885 |
| **Cytogenetics:** | 5q32 |
| **RefSeq ORF:** | 1434 |
| **Synonyms:** | CAMKA; CaMKIIalpha; CaMKIINalpha; MRD53; MRT63 |
| **Summary:** | The product of this gene belongs to the serine/threonine protein kinases family, and to the Ca(2+)/calmodulin-dependent protein kinases subfamily. Calcium signaling is crucial for several aspects of plasticity at glutamatergic synapses. This calcium calmodulin-dependent protein kinase is composed of four different chains: alpha, beta, gamma, and delta. The alpha chain encoded by this gene is required for hippocampal long-term potentiation (LTP) and spatial learning. In addition to its calcium-calmodulin (CaM)-dependent activity, this protein can undergo autophosphorylation, resulting in CaM-independent activity. Several transcript variants encoding distinct isoforms have been identified for this gene. [provided by RefSeq, Jun 2018] |
| **Protein Families:** | Druggable Genome, Protein Kinase |
| **Protein Pathways:** | Calcium signaling pathway, ErbB signaling pathway, Glioma, GnRH signaling pathway, Long-term potentiation, Melanogenesis, Neurotrophin signaling pathway, Olfactory transduction, Oocyte meiosis, Wnt signaling pathway |

## Product images:




Coomassie blue staining of purified CAMK2A protein (Cat# TP305202). The protein was produced from HEK293T cells transfected with CAMK2A cDNA clone (Cat# [RC205202]) using MegaTran 2.0 (Cat# [TT210002]).