

## Recombinant Human CAMK2A, GST-tagged, Active

**Cat. No.** CAMK2A-264H    **Lot. No.** (See product label)

### SPECIFICATION

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>      | Recombinant full-length human CAMK2alpha was expressed in Sf9 cells using an N-terminal GST tag. MW = 74 kDa.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Species</b>               | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Source</b>                | Sf9 Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Description</b>           | CAMK2α is a ser/thr protein kinase that is a member of the Ca <sup>2+</sup> /calmodulin-dependent protein kinase family. CAMK2α is abundant in the brain as a major constituent of the postsynaptic density and is required for hippocampal long-term potentiation (LTP) and spatial learning. In addition to its Ca <sup>2+</sup> /calmodulin-dependent activity, CAMK2α can undergo autophosphorylation, resulting in Ca <sup>2+</sup> /calmodulin-independent activity. The protein level of CAMK2α fluctuates during neuronal activity in cultured rat pup hippocampal neurons. The levels of CAMK2α increased with heightened neuronal activity. |
| <b>Sequence</b>              | Full-length.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Applications</b>          | Kinase Assay, Western Blot.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Storage And Stability</b> | Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.                                                                                                                                                                                                                                                                                                                                                                                                               |

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## GENE INFORMATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>           | CAMK2A calcium/calmodulin-dependent protein kinase II alpha [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Synonyms</b>            | CAMK2A; calcium/calmodulin-dependent protein kinase II alpha; CAMKA; KIAA0968; CaMKIINalpha; CaMK-II alpha subunitCaM-kinase II alpha chain; CaM kinase II alpha subunit; calcium/calmodulin-dependent protein kinase II alpha-B subunit; calcium/calmodulin-dependent protein kinase type II alpha chain; calcium/calmodulin-dependent protein kinase (CaM kinase) II alpha; EC 2.7.11.17; OTTHUMP00000165787; OTTHUMP00000165788; CaM kinase II subunit alpha; CaMK-II alpha subunit; CaMK-II subunit alpha; calcium/calmodulin-dependent protein kinase II alpha |
| <b>Gene ID</b>             | 815                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>mRNA Refseq</b>         | NM_015981                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Protein Refseq</b>      | NP_057065                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>MIM</b>                 | 114078                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>UniProt ID</b>          | Q9UQM7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Chromosome Location</b> | 5q32                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Pathway</b>             | Calcium signaling pathway; ErbB signaling pathway; Glioma; GnRH signaling pathway; Long-term potentiation; Melanogenesis; Neurotrophin signaling pathway; Olfactory transduction; Wnt signaling pathway                                                                                                                                                                                                                                                                                                                                                             |
| <b>Function</b>            | ATP binding; calmodulin binding; calmodulin-dependent protein kinase activity;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

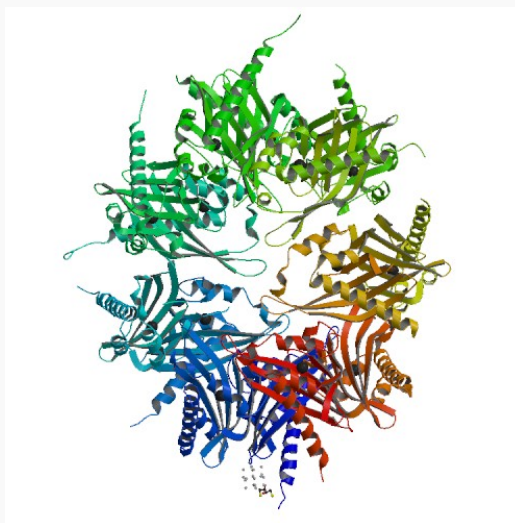
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nucleotide binding; transferase activity

PDB rendering based  
on 1hxx.



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