

CK2 as Drug Target

CK2 plays a role in a number of cellular processes, including maintenance of cell viability, protection of cells from apoptosis, cellular stress response. Its overexpression is associated with human tumors and CK2 has been shown to be involved in a variety of other diseases, such as glomerulonephritis, globozoospermia, inflammatory and autoimmune diseases, cardiac hypertrophy. Hence, CK2 is considered a promising drug target.

CK2 Product Line

KinaseDetect offers the most complete CK2 product line. We provide all three CK2 subunits ($\alpha 1$, $\alpha 2$, β), deletion mutants, holoenzymes containing either the $\alpha 1$ or $\alpha 2$ catalytic subunit, as well as monoclonal antibodies against the catalytic and regulatory subunits.

Our recombinant CK2 enzymes are

- human (including the catalytic CK2 subunit from *Z. mays*)
- > 95 % pure
- highly active
- produced in batch sizes suitable for HTS and crystallization

The quality control includes

- SDS-PAGE analysis with amounts up to 10 μ g
- checking for the absence of proteases
- determination of specific activity using the classical radiometric filter paper assay
- determination of K_m for ATP
- IC50 determination of known inhibitors

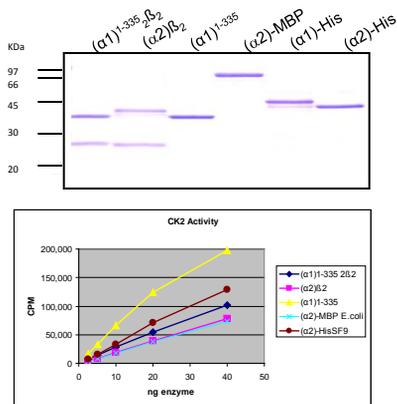


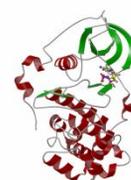
Fig. 1. SDS-PAGE analysis and activity of different CK2 enzymes

CK2 Products	Crystal grade
CK 2 $\alpha 1$ full length	
CK2 $\alpha 1^{1-335}$	√
CK2 $\alpha 1$, Zea mays	√
CK2 $\alpha 2$ MBP-tag	
CK2 $\alpha 2$ His-tag	
CK2 $\alpha 1^{Tik}$ [M163K,E167D]	
CK2 β full length	
CK2 β 1-208*	√
CK2 β^{And} [M166I]	
CK2 ($\alpha 1$) ₂ $\beta 2$ holoenzyme	
CK2 ($\alpha 1$) ¹⁻³³⁵ $\beta 2$ holoenzyme	√
CK2 ($\alpha 2$) $\beta 2$ holoenzyme	√
Anti CK2 α – monoclonal antibody	
Anti CK2 β – monoclonal antibody	
Resorufin – CK2 Kinase Inhibitor	
ARC(CK2)-Fluo1 – CK2 Assay Kit	

* additional 23 CK2 β mutants on request

Contact

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