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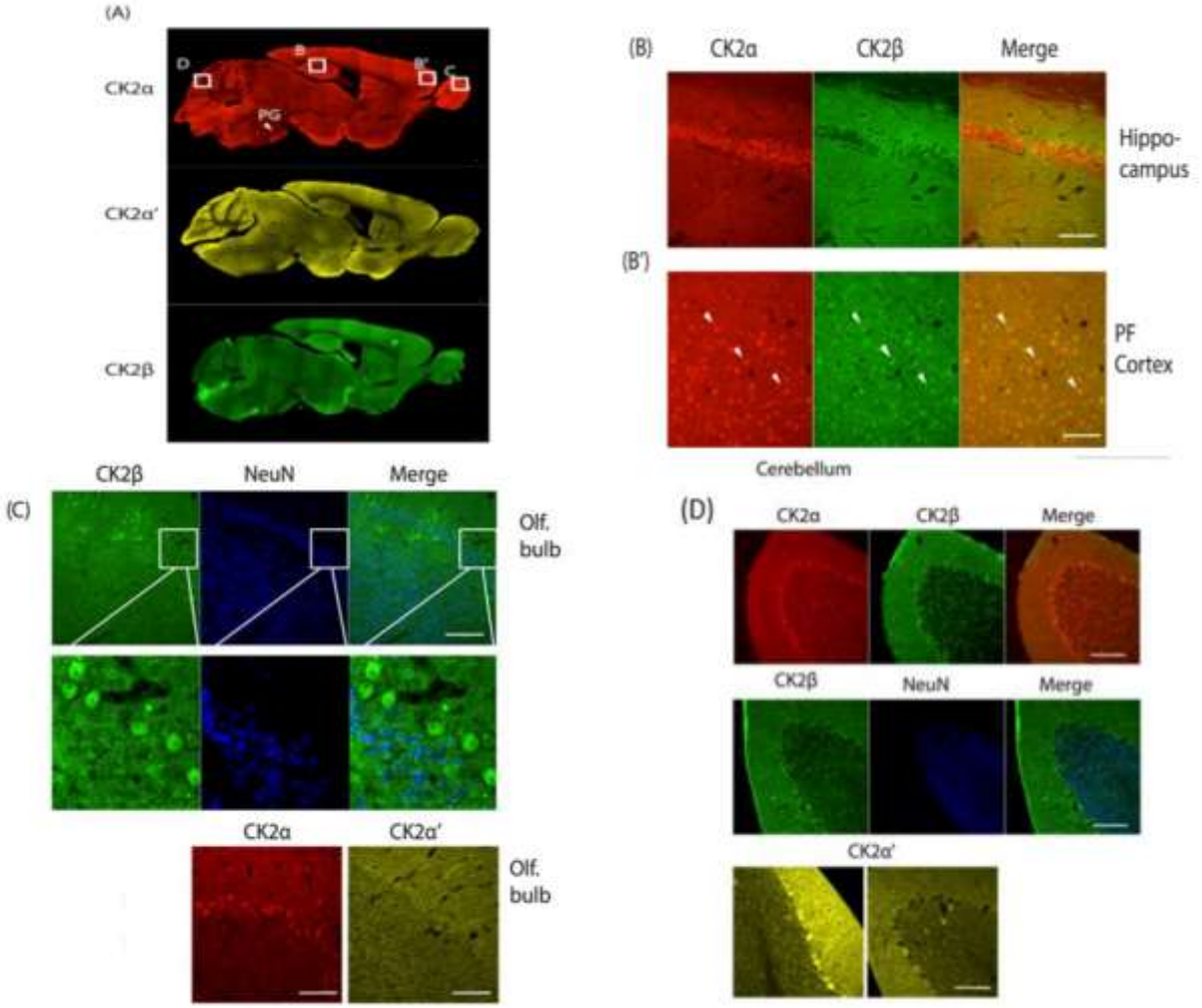
Castello J, Ragnauth A, Friedman E, Rebholz H. CK2-An Emerging Target for Neurological and Psychiatric Disorders. Pharmaceuticals (Basel). 2017 Jan 5;10(1). doi: 10.3390/ph10010007. Review. PubMed PMID: 28067771; PubMed Central PMCID: PMC5374411.



Protein kinase CK2 has received a surge of attention in recent years due to the evidence of its overexpression in a variety of solid tumors and multiple myelomas as well as its participation in cell survival pathways. CK2 is also upregulated in the most prevalent and aggressive cancer of brain tissue, glioblastoma multiforme, and in preclinical models, pharmacological inhibition of the kinase has proven successful in reducing tumor size and animal mortality. CK2 is highly expressed in the mammalian brain and has many bona fide substrates that are crucial in neuronal or glial homeostasis and signaling processes across synapses. Full and conditional CK2 knockout mice have further elucidated the importance of CK2 in brain development, neuronal activity, and behavior. This review will discuss recent advances in the field that point to CK2 as a regulator of neuronal functions and as a potential novel target to treat neurological and psychiatric disorders.