D-amino acid oxidase activator (DAOA, also known as G72) is a protein enriched in various parts of brain, spinal cord, and testis. DAOA is thought to interact with D-amino acid oxidase, a peroxisomal enzyme, and its gene was associated with schizophrenia in a number of studies.

In separate studies it has been shown to confer susceptibility to bipolar disorder. Therefore, it has been important in researching whether the Kraepelinian dichotomy is genuine. The gene itself was discovered during an investigation of chromosomal 13q22-q34 region,[3] which was previously linked to schizophrenia. G72 is transcribed into several proteins due to alternative splicing; the longest protein is called LG72 and consists of 153 amino acids. Although the protein was initially found to interact with DAO in yeast 2-hybrid experiment, one recent in vivo experiment showed LG72 presence only in mitochondria and failed to confirm the interaction.

The expression of DAOA may be regulated by the long non-coding RNA DAOA-AS1.

G72 protein regulates D-serine, a potent co-agonist of the N-methyl-D-aspartate (NMDA) neurotransmission, which is implicated in the pathophysiology of schizophrenia. In a recent study, patients with schizophrenia had a remarkable elevation of G72 protein expression in plasma (compared with healthy controls), and this is the first one indicating that the peripheral expression of a single protein may have the potential to be a diagnostic biomarker for schizophrenia.