Recombinant KAT3 protein (His tag)

Catalog Number	547548
Synonyms	Cysteine-S-conjugate beta-lyase 2; Kynurenine aminotransferase 3; Kynurenine aminotransferase III; KATIII; Kynurenine--glyoxylate transaminase; Kynurenine--oxoglutarate transaminase III
Species	Human
Expression System	E. coli
Accession	Q6YP21
Molecular Weight	Predictes a molecular mass of 49.08 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 50 kDa band.

Product Information

Sequence Region	38-454
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 38-454 aa (Q6YP21) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Kynurenine--oxoglutarate transaminase 3 (KYAT3) fragment (residues 38-454), a 417-amino acid soluble unit optimized for structural and biochemical studies. This human-derived protein catalyzes the transamination of L-kynurenine to kynurenic acid, a key neuromodulator, and exhibits beta-lyase activity, making it valuable for enzyme kinetics and neuropharmacology research. Kynurenine--oxoglutarate transaminase 3 (KYAT3) is a multifunctional human enzyme involved in tryptophan metabolism through the irreversible transamination of L-kynurenine to produce kynurenic acid (KA). KA acts as a broad-spectrum antagonist of ionotropic excitatory amino acid receptors, highlighting its significance in neuromodulation and neuroprotection pathways. Additionally, KYAT3 demonstrates beta-lyase activity, enabling cleavage of S- and Se-conjugates of L-(seleno)cysteine. The enzyme exhibits broad transaminase activity in vitro, efficiently utilizing glyoxylate as an amino group acceptor with substrates including aromatic amino acids, serine, cysteine, and others, while showing reduced activity with 2-oxoglutarate. This recombinant fragment represents a stable, soluble unit ideal for investigating its catalytic mechanisms and structural properties.