Recombinant ACMSD protein (His tag)

Catalog Number	547808
Synonyms	Picolinate carboxylase
Species	Human
Expression System	E. coli
Accession	Q8TDX5
Molecular Weight	Predictes a molecular mass of 39.69 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 40 kDa band.

Product Information

Sequence Region	1-336
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 1-336 aa (Q8TDX5) 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 Human 2-amino-3-carboxymuconate-6-semialdehyde decarboxylase (ACMSD), corresponding to amino acids 1-336, is a highly purified fragment designed for structural and functional studies. This stable and soluble protein unit enables researchers to investigate its critical role in tryptophan metabolism and neuroprotection. The full-length ACMSD enzyme, encoded by the ACMSD gene in Homo sapiens, catalyzes the conversion of alpha-amino-beta-carboxymuconate-epsilon-semialdehyde (ACMS) to alpha-aminomuconate semialdehyde (AMS). This reaction diverts tryptophan catabolism away from the spontaneous formation of quinolate (QA), a neurotoxic precursor of NAD implicated in neurodegenerative disorders. By controlling the metabolic fate of tryptophan along the kynurenine pathway, ACMSD functions as a key regulator in maintaining neuronal health and preventing excitotoxicity.