Recombinant 3HAO protein (His tag)

Catalog Number	544628
Synonyms	3-hydroxyanthranilate oxygenase; 3-HAO; h3HAO; 3-hydroxyanthranilic acid dioxygenase; HAD
Species	Human
Expression System	E. coli
Accession	P46952
Molecular Weight	Predictes a molecular mass of 34.21 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 35 kDa band.

Product Information

Sequence Region	1-286
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 1-286 aa (P46952) 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	This product is a recombinant fragment of human 3-hydroxyanthranilate 3,4-dioxygenase (3-HAO), encompassing amino acids 1-286. It is designed for high solubility and stability, making it ideal for structural studies, enzymatic assays, and biochemical research focused on the kynurenine pathway. 3-hydroxyanthranilate 3,4-dioxygenase (EC 1.13.11.6) is a cytosolic enzyme that catalyzes the oxidative ring opening of 3-hydroxyanthranilate to form 2-amino-3-carboxymuconate semialdehyde, which spontaneously cyclizes to quinolinate. This reaction is a critical step in the de novo NAD+ biosynthesis pathway via the kynurenine route. The enzyme is localized in the cytoplasm, as confirmed by experimental evidence, and plays a key role in cellular metabolism by linking tryptophan degradation to NAD+ production, with implications in various physiological and pathological processes.