Recombinant NPL protein (His tag)

Catalog Number	545850
Synonyms	NALase; N-acetylneuraminate pyruvate-lyase; N-acetylneuraminic acid aldolase; Sialate lyase; Sialate-pyruvate lyase; Sialic acid aldolase; Sialic acid lyase
Species	Human
Expression System	E. coli
Accession	Q9BXD5
Molecular Weight	Predictes a molecular mass of 36.82 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 37 kDa band.

Product Information

Sequence Region	1-320
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 1-320 aa (Q9BXD5) 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 N-acetylneuraminate lyase (NALase) fragment (amino acids 1-320) - a highly purified, stable protein preparation ideal for studying sialic acid metabolism and degradation pathways. This soluble fragment maintains the complete functional domain of the enzyme, making it perfect for structural studies, biochemical assays, and metabolic research applications. N-acetylneuraminate lyase (NALase) is a cytoplasmic enzyme that catalyzes the cleavage of N-acetylneuraminic acid (sialic acid) to form pyruvate and N-acetylmannosamine via a Schiff base intermediate. This enzyme plays a crucial role in preventing sialic acids from being recycled and returning to the cell surface. NALase is also involved in the N-glycolylneuraminic acid (Neu5Gc) degradation pathway, which is particularly important in humans who acquire Neu5Gc from dietary sources but cannot synthesize it endogenously due to the inactive CMAHP enzyme. The enzyme's cytoplasmic localization and its function in sialic acid degradation make it a key player in cellular metabolic regulation and potential therapeutic targeting.