Recombinant HDAC5 protein (His tag)

Catalog Number	546265
Synonyms	HD5; Antigen NY-CO-9
Species	Human
Expression System	E. coli
Accession	Q9UQL6
Molecular Weight	Predictes a molecular mass of 49.37 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 49 kDa band.

Product Information

Sequence Region	680-1122
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 680-1122 aa (Q9UQL6) 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 Histone Deacetylase 5 (HD5) Fragment (aa 680-1122) is a high-purity, stable protein derived from human HDAC5, designed for structural and biochemical studies. This fragment retains key properties of the full-length enzyme, offering researchers a reliable tool for investigating epigenetic regulation and transcriptional mechanisms. Histone deacetylase 5 (HDAC5) is a crucial enzyme in epigenetic regulation, responsible for deacetylating lysine residues on core histones H2A, H2B, H3, and H4. This activity contributes to transcriptional repression and influences cell cycle progression, developmental processes, and muscle maturation by repressing transcription factors like MEF2C. HDAC5 also plays roles in breast cancer via MTA1-mediated regulation of ESR1 expression and acts as a corepressor for RARA, impacting microRNA-10a repression and inflammatory responses. The protein shuttles between the nucleus and cytoplasm, with cytoplasmic localization during myocyte differentiation dependent on phosphorylation and interaction with 14-3-3 chaperone proteins. The provided fragment (aa 680-1122) is a computationally optimized, stable region ideal for experimental applications without containing known domains, ensuring solubility and functionality for research use.