Recombinant DACH2 protein (His tag)

Catalog Number	549070
Synonyms	Dach2
Species	Human
Expression System	E. coli
Accession	Q96NX9
Molecular Weight	Predictes a molecular mass of 13.56 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 14 kDa band.

Product Information

Sequence Region	66-169
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 66-169 aa (Q96NX9) 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 Dachshund homolog 2 (Dach2) fragment (residues 66-169) is a highly stable and soluble protein unit designed for structural and biochemical studies. This fragment enables researchers to investigate the molecular mechanisms of Dach2, a key transcription factor involved in organogenesis and myogenesis regulation. Dachshund homolog 2 (Dach2), encoded by the DACH2 gene in humans, functions as a transcription factor critical for organ development. It acts as a coregulator of SIX1 and SIX6, and serves as a corepressor of SIX6 in controlling proliferation by directly repressing cyclin-dependent kinase inhibitors like p27Kip1. Dach2 is recruited with SIX6 to the p27Kip1 promoter in embryonal retina, involving interactions with NCOR1, TBL1, HDAC1, and HDAC3. It also participates in myogenesis regulation alongside PAX3, SIX1, and EYA2, with Dach2 and PAX3 mutually reinforcing each other's expression in developing somites. The protein localizes to the nucleus, where it likely binds DNA via its DACHbox-N domain to exert its transcriptional regulatory functions.