Recombinant LRC55 protein (His tag)

Catalog Number	540563
Synonyms	BK channel auxiliary gamma subunit LRRC55
Species	Human
Expression System	E. coli
Accession	Q6ZSA7
Molecular Weight	Predictes a molecular mass of 26.56 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 27 kDa band.

Product Information

Sequence Region	37-258
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 37-258 aa (Q6ZSA7) 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 Leucine-rich repeat-containing protein 55 (LRRC55) fragment (aa 37-258) is a high-purity protein designed for studying BK channel regulation. This 222-amino acid fragment specifically encompasses the LRRCT functional domain, making it an ideal tool for investigating calcium-activated potassium channel modulation and neuronal excitability mechanisms. Leucine-rich repeat-containing protein 55 (LRRC55) functions as an auxiliary gamma subunit of the large-conductance, voltage and calcium-activated potassium channel (BK alpha). It significantly modulates the BK channel's gating properties by producing a marked shift in the voltage dependence of activation in the hyperpolarizing direction, even in the absence of calcium. The protein is localized to the cell membrane as a single-pass membrane protein, positioning it strategically for its role in regulating potassium channel activity and neuronal signaling pathways.