Recombinant ABCB5 protein (His tag)

Catalog Number	540398
Synonyms	ABCB5 P-gp; P-glycoprotein ABCB5
Species	Human
Expression System	E. coli
Accession	Q2M3G0
Molecular Weight	Predictes a molecular mass of 32.83 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 33 kDa band.

Product Information

Sequence Region	975-1257
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 975-1257 aa (Q2M3G0) 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 ABCB5 P-gp Fragment (aa 975-1257) - A high-quality protein fragment encompassing the critical ABC transporter 2 domain of the ATP-binding cassette sub-family B member 5, designed for studying multidrug resistance mechanisms and transporter function in research applications. The full-length ATP-binding cassette sub-family B member 5 (ABCB5 P-gp) is an energy-dependent efflux transporter that plays a crucial role in decreased drug accumulation in multidrug-resistant cells, contributing to chemotherapy resistance in cancer treatment. This P-glycoprotein is specifically localized to the cell membrane as a multi-pass membrane protein, where it functions as an active transporter. Beyond its established role in drug resistance, ABCB5 is specifically present in limbal stem cells where it contributes to corneal development and repair processes, highlighting its importance in both pathological and physiological contexts. The protein's transporter activity (EC 7.6.2.2) enables ATP-dependent movement of substrates across cellular membranes, making it a key target for understanding cellular defense mechanisms and tissue regeneration.