Recombinant S22A2 protein (His tag)

Catalog Number	544080
Synonyms	Organic cation transporter 2; hOCT2
Species	Human
Expression System	E. coli
Accession	O15244
Molecular Weight	Predictes a molecular mass of 13.49 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 14 kDa band.

Product Information

Sequence Region	44-150
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 44-150 aa (O15244) 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	This product is a high-quality recombinant protein fragment of Solute carrier family 22 member 2 (Organic cation transporter 2, hOCT2), corresponding to amino acids 44-150. This 107-amino acid fragment is designed for structural and biochemical studies, offering a stable and soluble unit ideal for investigating the transport mechanisms of organic cations and neurotransmitters. The full-length SLC22A2 protein, encoded by the SLC22A2 gene, is an electrogenic voltage-dependent transporter that facilitates the bidirectional movement of various organic cations, including endogenous bioactive amines, cationic drugs, and xenobiotics. It functions as a Na+-independent uniporter, driven by electrochemical potential, and is implicated in the uptake and disposition of cationic compounds through hepatic and renal clearance. Key roles include regulating monoamine neurotransmitters (e.g., dopamine, serotonin) in the central nervous system, transporting acetylcholine in airway epithelium, and handling compounds like prostaglandins and polyamines. Subcellularly, it localizes to basolateral membranes in hepatocytes and proximal tubules, apical membranes in distal tubules and bronchial ciliated cells, and basal membranes in Sertoli cells, underscoring its importance in barrier function and organic compound transport across tissues.