Recombinant ST1C2 protein (His tag)

Catalog Number	544032
Synonyms	ST1C2; Sulfotransferase 1C1; SULT1C#1; humSULTC2
Species	Human
Expression System	E. coli
Accession	O00338
Molecular Weight	Predictes a molecular mass of 36.54 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 38 kDa band.

Product Information

Sequence Region	1-296
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 1-296 aa (O00338) 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 Sulfotransferase 1C2 (ST1C2) Fragment (1-296) is a high-quality, stable protein preparation ideal for studying sulfotransferase activity and mitochondrial function. This soluble fragment maintains key functional domains while offering enhanced stability for structural and biochemical applications. Sulfotransferase 1C2 (SULT1C2) is a human enzyme that catalyzes the sulfate conjugation of phenolic compounds using 3'-phospho-5'-adenylyl sulfate (PAPS) as a sulfate donor. The enzyme demonstrates substrate specificity, showing no activity toward steroids, dopamine, acetaminophen, or alpha-naphthol. Notably, SULT1C2 localizes to multiple cellular compartments including cytoplasm, lysosomes, and mitochondria, where it uniquely sulfates cholesterol to produce cholesterol sulfate. This mitochondrial activity alters membrane organization, enhances protein complex mobility, and increases state-III respiration, thereby modulating mitochondrial function. Additionally, SULT1C2 plays a role in xenobiotic metabolism by catalyzing the sulfation of carcinogenic compounds like N-hydroxy-2-acetylaminofluorene, generating reactive intermediates that can form DNA adducts and potentially lead to mutagenesis.