Recombinant CP2F1 protein (His tag)

Catalog Number	542219
Synonyms	CYPIIF1
Species	Human
Expression System	E. coli
Accession	P24903
Molecular Weight	Predictes a molecular mass of 57.16 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 57 kDa band.

Product Information

Sequence Region	1-491
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 1-491 aa (P24903) 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 Cytochrome P450 2F1 (CYP2F1) fragment (amino acids 1-491) is a high-quality protein preparation ideal for studying xenobiotic metabolism and pneumotoxicant bioactivation. This computationally optimized fragment represents a stable, soluble unit of the enzyme, making it perfect for structural studies and biochemical assays. Cytochrome P450 2F1 (CYP2F1) is a human endoplasmic reticulum membrane protein that plays a crucial role in the metabolism of various pneumotoxic compounds, including naphthalene. This enzyme demonstrates specific catalytic activities, being able to dealkylate ethoxycoumarin, propoxycoumarin, and pentoxyresorufin, while showing minimal activity toward ethoxyresorufin and only trace dearylation activity toward benzyloxyresorufin. Notably, CYP2F1 bioactivates 3-methylindole through dehydrogenation to form the electrophilic metabolite 3-methylene-indolenine, highlighting its importance in toxicological research. As a peripheral membrane protein localized to both endoplasmic reticulum and microsome membranes, CYP2F1 represents a key enzyme in understanding chemical-induced pulmonary toxicity and xenobiotic metabolism pathways.