Recombinant DUOX2 protein (His tag)

Catalog Number	548343
Synonyms	Large NOX 2; Long NOX 2; NADH/NADPH thyroid oxidase p138-tox; NADPH oxidase/peroxidase DUOX2; NADPH thyroid oxidase 2; Thyroid oxidase 2; p138 thyroid oxidase
Species	Human
Expression System	E. coli
Accession	Q9NRD8
Molecular Weight	Predictes a molecular mass of 37.10 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 40 kDa band.

Product Information

Sequence Region	623-927
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 623-927 aa (Q9NRD8) 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 Dual oxidase 2 (DUOX2) fragment (residues 623-927) from Homo sapiens, encompassing the EF-hand 1 and EF-hand 2 domains. This high-purity protein is an essential tool for investigating calcium-binding regulation in hydrogen peroxide generation, supporting studies on thyroid hormone synthesis and mucosal antimicrobial defense. Dual oxidase 2 (DUOX2) is a membrane-bound enzyme critical for producing hydrogen peroxide, which is required for thyroid peroxidase and lactoperoxidase activities. It plays a key role in thyroid hormone synthesis and in lactoperoxidase-mediated antimicrobial defense at mucosal surfaces. The enzyme may also exhibit intrinsic peroxidase activity through its N-terminal domain. DUOX2 localizes to the apical membrane of epithelial cells and, under resting conditions, resides on internal membranes; it translocates to the plasma membrane and cell-cell junctions upon exposure to pathogens like Escherichia coli, highlighting its dynamic role in innate immune responses.