

Recombinant Human HBA1 Protein (His Tag)

Catalog No. PKSH032530

Note: Centrifuge before opening to ensure complete recovery of vial contents.

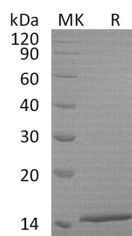
Description

Synonyms	Hemoglobin subunit alpha;Alpha-globin;Hemoglobin alpha chain;HBA1;HBH;HBA-T3
Species	Human
Expression Host	E.coli
Sequence	Met 1-Arg142
Accession	P69905
Calculated Molecular Weight	16.7 kDa
Observed molecular weight	15 kDa
Tag	N-His
Bioactivity	Not validated for activity

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20mM Tris-HCl, 150mM NaCl, 1mM EDTA, pH 8.0. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 95 % as determined by reducing SDS-PAGE.

Background

For Research Use Only

Hemoglobin subunit alpha 1 (HBA1), also known as $\alpha 2\beta 2$, is a hetero-tetramer consisting of two α and two β subunits held together by non-covalent interactions. Each subunit contains a heme group with an iron atom in the Fe²⁺ state. Cooperativity of Hemoglobin (Hb) in binding with O₂ and allosteric regulatory binding properties with CO₂, H⁺, Cl⁻, and 2,3-DPG (2,3-bisphosphoglycerate) are based on subunit interactions. HBA1 is the most common type of Hb in adult humans, which mediates the transport of oxygen and carbon dioxide in the blood. In recent years, Hb α and β chains have been found co-expressed in alveolar cells, mesangial cells of the kidney, retinal ganglion cells, hepatocytes and neurons. Endothelial and peripheral catecholaminergic cells express exclusively the α chain, while macrophages present the β chain only.