

## 32-8597: Recombinant Human Hemoglobin Subunit $\alpha$ /HBA1 (N-6His)

**Gene :** HBA1  
**Gene ID :** 3039  
**Uniprot ID :** P69905

### Description

Source: E.coli.  
MW :16.7kD.

Recombinant Human Hemoglobin subunit alpha is produced by our E.coli expression system and the target gene encoding Met1-Arg142 is expressed with a 6His tag at the N-terminus. Hemoglobin subunit alpha 1 (HBA1), also known as  $\alpha 2$  beta2, is a hetero-tetramer consisting of two  $\alpha$  and two beta subunits held together by non-covalent interactions. Each subunit contains a heme group with an iron atom in the Fe<sup>2+</sup> state. Cooperativity of Hemoglobin (Hb) in binding with O<sub>2</sub> and allosteric regulatory binding properties with CO<sub>2</sub>, H<sup>+</sup>, Cl<sup>-</sup>, 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  $\alpha$  and beta 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  $\alpha$  chain, while macrophages present the beta chain only.

### Product Info

**Amount :** 10  $\mu$ g / 50  $\mu$ g  
**Content :** Lyophilized from a 0.2  $\mu$ m filtered solution of 20mM PB, 150mM NaCl, pH 7.0.  
**Storage condition :** Lyophilized protein should be stored at -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at -20°C for 3 months.  
**Amino Acid :** MNHKVHHHHHMLSPADKTNVKAAWGKVGAGHAGEYGAELERMFLSFPTTKTYFPHFDLSHGSAQVKGHG  
KKVADALTNVAHVDDMPNALSALSDLHAHKLKRVDPVNFKLLSHCLLVTLAAHLPAEFTPAVHASLDFKFLASVS  
TVLTSKYR

### Application Note

**Endotoxin :** Less than 0.1 ng/ $\mu$ g (1 IEU/ $\mu$ g) as determined by LAL test.