

# Recombinant Human HBA2

**Cat. No.** HBA2-29306TH    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant full length Human Hemoglobin subunit alpha expressed in <i>Saccharomyces cerevisiae</i> ; amino acids 1-142 , MWt 15.2kDa. Protein is tagged with 26 kDa proprietary tag.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>ProteinLength</b>    | 1-142 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Description</b>      | The human alpha globin gene cluster located on chromosome 16 spans about 30 kb and includes seven loci: 5- zeta - pseudozeta - mu - pseudoalpha-1 - alpha-2 - alpha-1 - theta - 3. The alpha-2 (HBA2) and alpha-1 (HBA1) coding sequences are identical. These genes differ slightly over the 5 untranslated regions and the introns, but they differ significantly over the 3 untranslated regions. Two alpha chains plus two beta chains constitute HbA, which in normal adult life comprises about 97% of the total hemoglobin; alpha chains combine with delta chains to constitute HbA-2, which with HbF (fetal hemoglobin) makes up the remaining 3% of adult hemoglobin. Alpha thalassemias result from deletions of each of the alpha genes as well as deletions of both HBA2 and HBA1; some nondeletion alpha thalassemias have also been reported. |
| <b>Form</b>             | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Purity</b>           | >90% by SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Storage buffer</b>   | Preservative: None<br>Constituents: 30% Glycerol, 0.5% Triton-X-100, 50mM HEPES,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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|                                 |                                                                                                                                                           |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 | 30mM Glutathione, 100mM Sodium chloride, 1mM DTT, pH 7.5                                                                                                  |
| <b>Storage</b>                  | Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.                                                                     |
| <b>Sequences of amino acids</b> | MVLSPADKTNVKAAWGKVGAHAGEYGAEALERMFLSFPTT KTYFPHFDLSHGSAQ<br>VKGHGKKVADALTNAVAHVDDMP NALSALSDLHAHKLRVDPVNFKLLSHCLLVTLA<br>AHLPA EFTPAVHASLDKFLASVSTVLTSKYR |
| <b>Full Length</b>              | Full L.                                                                                                                                                   |
| <b>GENE INFORMATION</b>         |                                                                                                                                                           |
| <b>Gene Name</b>                | HBA2 hemoglobin, alpha 2 [ Homo sapiens ]                                                                                                                 |
| <b>Official Symbol</b>          | HBA2                                                                                                                                                      |
| <b>Synonyms</b>                 | HBA2; hemoglobin, alpha 2; hemoglobin subunit alpha;                                                                                                      |
| <b>Gene ID</b>                  | 3040                                                                                                                                                      |
| <b>mRNA Refseq</b>              | NM_000517                                                                                                                                                 |
| <b>Protein Refseq</b>           | NP_000508                                                                                                                                                 |
| <b>MIM</b>                      | 141850                                                                                                                                                    |
| <b>Uniprot ID</b>               | P69905                                                                                                                                                    |
| <b>Chromosome Location</b>      | 16p13.3                                                                                                                                                   |
| <b>Pathway</b>                  | African trypanosomiasis, organism-specific biosystem; African trypanosomiasis,                                                                            |

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conserved biosystem; Malaria, organism-specific biosystem; Malaria, conserved biosystem; Selenium Pathway, organism-specific biosystem;

**Function**

contributes\_to haptoglobin binding; heme binding; metal ion binding; oxygen binding; oxygen transporter activity;

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