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★ Reviewed, UniProtKB/Swiss-Prot **P02240** (LGB2_LUPLU)Last modified November 25, 2008. Version 77. [History...](#)

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Protein names	<i>Recommended name:</i> Leghemoglobin-2 <i>Alternative name(s):</i> Leghemoglobin II
Organism	Lupinus luteus (European yellow lupin)
Taxonomic identifier	3873 [NCBI]
Taxonomic lineage	Eukaryota · Viridiplantae · Streptophyta · Embryophyta · Tracheophyta · Spermatophyta · Magnoliophyta · eudicotyledons · core eudicotyledons · rosids · eurosids I · Fabales · Fabaceae · Papilionoideae · Genisteae · Lupinus

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Sequence length	154 AA.
Sequence status	Complete.
Sequence processing	The displayed sequence is further processed into a mature form.
Protein existence	Evidence at protein level.

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Function	Provides oxygen to the bacteroids. This role is essential for symbiotic nitrogen fixation.
Subunit structure	Monomer.
Tissue specificity	Root nodules.
Sequence similarities	Belongs to the plant globin family .

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ID LGB2_LUPLU Reviewed; 154 AA.
AC P02240;
DT 21-JUL-1986, integrated into UniProtKB/Swiss-Prot.
DT 23-JAN-2007, sequence version 2.
DT 25-NOV-2008, entry version 77.
DE RecName: Full=Leghemoglobin-2;
DE AltName: Full=Leghemoglobin II;
OS *Lupinus luteus* (European yellow lupin).
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons;
OC rosids; eurosids I; Fabales; Fabaceae; Papilionoideae; Genisteae;
OC *Lupinus*.
OX NCBI_TaxID=3873;
RN [1]
RP PROTEIN SEQUENCE OF 2-154.
RC TISSUE=Root nodule;
RA Egorov T.A., Kazakov V.K., Shakhparonov M.I., Feigina M.Y.,
RA Kostetsky P.V.;
RT "Primary structure of leghemoglobin II from the nodules of the yellow
RT lupin (*Lupinus luteus* L.).";
RL Bioorg. Khim. 4:476-480(1978).
RN [2]
RP NUCLEOTIDE SEQUENCE [MRNA] OF 62-154.
RX MEDLINE=87315070; PubMed=2442601; DOI=10.1007/BF00580652;
RA Konieczny A., Jensen E.O., Marcker K.A., Legocki A.B.;
RT "Molecular cloning of lupin leghemoglobin cDNA.";
RL Mol. Biol. Rep. 12:61-66(1987).
RN [3]
RP X-RAY CRYSTALLOGRAPHY (2.0 ANGSTROMS).
RA Arutiunian E.G., Kuranova I.P., Vainshtein B.K., Steigemann W.;
RT "X-ray structural investigation of leghemoglobin. VI. Structure of
RT acetate-ferrileghemoglobin at a resolution of 2.0 A.";
RL Sov. Phys. Crystallogr. 25:43-52(1980).
RN [4]
RP X-RAY CRYSTALLOGRAPHY (5.0 ANGSTROMS).
RC TISSUE=Root nodule;
RX MEDLINE=75118996; PubMed=1118009; DOI=10.1038/254163a0;
RA Vainshtein B.K., Harutyunyan E.H., Kuranova I.P., Borisov V.V.,
RA Sosfenov N.I., Pavlovsky A.G., Grebenko A.I., Konareva N.V.;
RT "Structure of leghaemoglobin from lupin root nodules at 5-A
RT resolution.";
RL Nature 254:163-164(1975).
CC -!- FUNCTION: Provides oxygen to the bacteroids. This role is
CC essential for symbiotic nitrogen fixation.