

Question 3.1

En utilisant BLASTP, identifier le nom du gène, l'espèce d'origine et la fonction de chacune des protéines de sequences.fasta

Sequence 1 :

MGEIGFTEKQEALVKESWEILKQDIPKYSLHFFSQILEIAPAAKGLFSFLRDSDEVPHNNPKL
KAHAVKVFKMTCETAIQLREEGKVVVADTTLQYLGSIHLKSGVIDPHFEVVKEALLRTLKEGL
GEKYNEEVEGAWSQAYDHLALAIKTEMKQEEES

☒ select all 100 sequences selected

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[MSA Viewer](#)

	Description	Scientific Name	Max Score	Total Score	Query Cover	E value	Per. Ident	Acc. Len	Accession
<input checked="" type="checkbox"/>	hemoglobin 2 [Arabidopsis thaliana]	Arabidop...	323	323	100%	4e-111	100.00%	158	NP_187663.1
<input checked="" type="checkbox"/>	unnamed protein product [Arabidopsis thaliana]	Arabidop...	320	320	100%	5e-110	99.37%	158	CAA0381956.1
<input checked="" type="checkbox"/>	unnamed protein product [Arabidopsis arenosa]	Arabidop...	319	319	99%	1e-109	98.73%	159	CAE5966774.1
<input checked="" type="checkbox"/>	non-symbiotic hemoglobin 2 [Arabidopsis lyrata subsp. I...	Arabidop...	316	316	99%	2e-108	97.45%	159	XP_002884795.1
<input checked="" type="checkbox"/>	Globin [Arabidopsis suecica]	Arabidop...	316	316	99%	2e-108	98.09%	159	KAG7581043.1
<input checked="" type="checkbox"/>	Non-symbiotic hemoglobin 2 [Cardamine amara subsp.	Cardami...	312	312	100%	6e-107	95.57%	158	KAL1187836.1

https://blast.ncbi.nlm.nih.gov/Blast.cgi?CMD=Get&RID=KYTZWDGF016#alnHdr_NP_187663

Espèce : https://en.wikipedia.org/wiki/Arabidopsis_thaliana

Fonction : Hemoglobin 2 = Rôle dans le transport d'oxygène

Séquence 2 :

MEKVPGEMEIERRERSEELSEAERKAVQATWARLYANCEDVGVAIVRFFVNFPSAKQYFS
QFKHMEEPLEMERSPQLRKHACRVMGALNTVVENLHDPEKVSSVLSLVGKAHALKHKVEP
VYFKILSGVILEVIAEEFANDFPETQRAWAKLRGLIYSHVTAAYKEVGWVQQVNPATTPPA
TLPSSGP

Description	Scientific Name	Max Score	Total Score	Query Cover	E value	Per. Ident	Acc. Len	Accession
<input checked="" type="checkbox"/> cytoglobin [Bos taurus]	Bos taurus	392	392	100%	3e-137	100.00%	190	NP_001193649.1
<input checked="" type="checkbox"/> cytoglobin isoform X1 [Orcinus orca]	Orcinus...	390	390	100%	9e-137	99.47%	190	XP_004275559.1
<input checked="" type="checkbox"/> cytoglobin [Otolemur garnettii]	Otolemu...	390	390	100%	2e-136	98.95%	190	XP_003786147.1

https://blast.ncbi.nlm.nih.gov/Blast.cgi#alnHdr_NP_001193649

Espèce : [https://en.wikipedia.org/wiki/Cattle_\(Bos_taurus\)](https://en.wikipedia.org/wiki/Cattle_(Bos_taurus))

Rôle : https://en.wikipedia.org/wiki/Cytoglobin_transfer_d'oxygène_en_conditions_d'hypoxie

Séquence 3:

MVLSAADKNNVKGIFTKIAGHAE EYGAETLERMFTTYPPTKTYFP HFDLSHGSAQIKGHGKK
VVAALIEAANHIDDIAGT LSKLSDLHAHKLRVDPVNFKLLGQCFLVVVAIHHPAALTPEVHASLD

KFLCAVGTVLTAKYR

	Description	Scientific Name	Max Score	Total Score	Query Cover	E value	Per. Ident	Acc. Len	Accession
✓	hemoglobin subunit alpha-A [Gallus gallus]	Gallus g...	290	290	100%	1e-98	100.00%	142	NP_001004376.1
✓	hypothetical protein CIB84_011841 [Bambusicola thorac...	Bambusi...	288	288	100%	7e-98	99.30%	142	POI24408.1
✓	RecName: Full=Hemoglobin subunit alpha-A; AltName: ...	Meleagri...	288	288	100%	1e-97	99.30%	142	P81023.2
✓	hemoglobin subunit alpha-A [Meleagris gallopavo]	Meleagri...	286	286	100%	4e-97	98.59%	142	XP_003210796.1

https://blast.ncbi.nlm.nih.gov/Blast.cgi#alnHdr_NP_001004376

Espèce : Gallus gallus https://en.wikipedia.org/wiki/Red_junglefowl

Rôle: hemoglobin subunit alpha-A → contribue aux fonctions de l'hémoglobine et du transport d'oxygène

Séquence 4:

https://blast.ncbi.nlm.nih.gov/Blast.cgi#alnHdr_NP_001349775

Espèce : Homo sapiens <https://en.wikipedia.org/wiki/Human>

Rôle : myoglobin → Contribue à la motricité musculaire

	Description	Scientific Name	Max Score	Total Score	Query Cover	E value	Per. Ident	Acc. Len	Accession
✓	myoglobin [synthetic construct]	synthetic...	313	313	100%	3e-107	100.00%	155	AAX36993.1
✓	myoglobin isoform 1 [Homo sapiens]	Homo sa...	312	312	100%	4e-107	100.00%	154	NP_001349775.1
✓	myoglobin isoform CRA_a [Homo sapiens]	Homo sa...	313	313	100%	4e-107	100.00%	166	EAW60065.1

Séquence 5:

MERLESELIRQSWRAVSRSPLEHGTVLFSRLFALEPSLLPLFQYNGRQFSSPEDCLSSPEFL
DHIRKVMLVIDAAVTNVEDLSSLEEYLATLGRKHRAVGVRLSSFSTVGESLLYMLEKCLGPDF
TPATRTAWSQLYGAVVQAMSRGWDGE

	Description	Scientific Name	Max Score	Total Score	Query Cover	E value	Per. Ident	Acc. Len	Accession
✓	neuroglobin [Rattus norvegicus]	Rattus n...	308	308	100%	2e-105	100.00%	151	NP_203523.2
✓	neuroglobin isoform CRA_a [Rattus norvegicus]	Rattus n...	307	307	100%	1e-104	100.00%	176	EDL81623.1
✓	RecName: Full=Neuroglobin; AltName: Full=Nitrite redu...	Rattus n...	305	305	100%	2e-104	99.34%	151	Q99JA8.1

https://blast.ncbi.nlm.nih.gov/Blast.cgi#alnHdr_NP_203523

Rôle : Neuroglobin (<https://en.wikipedia.org/wiki/Neuroglobin>) transport d'oxygène dans le système nerveux périphérique

Espèce : Rattus norvegicus (https://en.wikipedia.org/wiki/Brown_rat)

