

TRABAJO FINAL

Curso: Lenguaje de Programación II.

Semestre: 2021-2

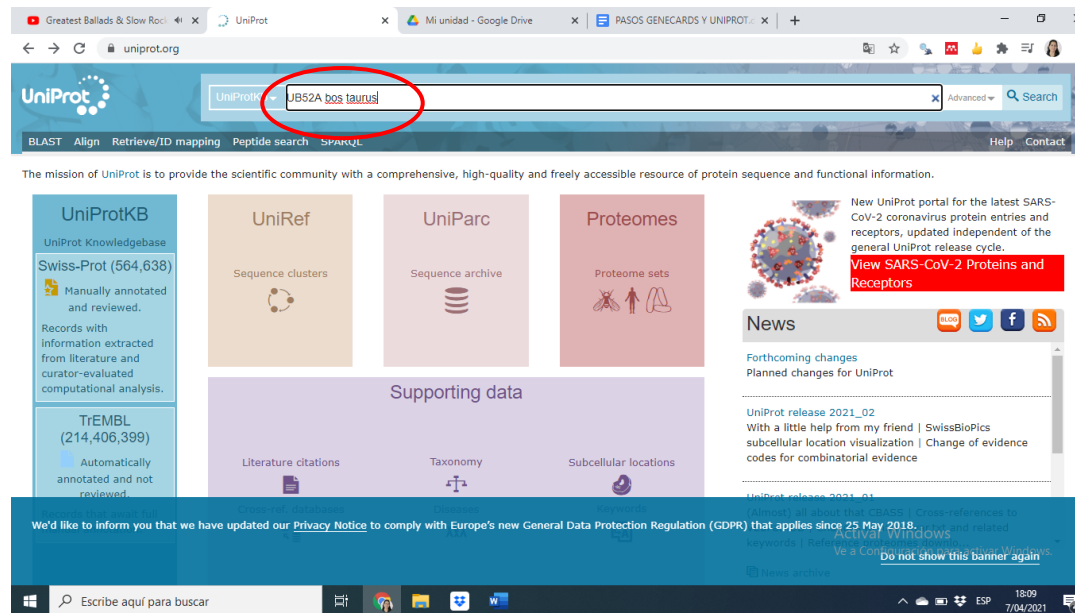
Tema: webscraeo a UniProt (<https://www.uniprot.org/>).

INDICACIONES:

- El trabajo es grupal (integrantes de grupos ya indicados)
- Utilizar *Jupyter notebook*.
- Trabajar en equipo vía *GitHub* entre los miembros de los grupos. (Sugerencia: el jefe de grupo puede crear el repositorio del proyecto e invitar a los demás integrantes a colaborar en el proyecto).

PROCEDIMIENTO REFERENCIAL:

1. Descargar y explorar el archivo ***genes identificados con vecinos.xlsx*** compuesta por varias hojas las cuales tienen una columna con etiqueta: GenAbrev.
2. Para cada nombre del gen en abreviado (GenAbrev), abrir la página <https://www.uniprot.org> y en el buscador solicitar la búsqueda de cada una de la forma siguiente: colocar el nombre del gen y la palabra *Bos Taurus*. Abajo se muestra para **UBA52 Bos taurus**



3. Se mostrará una lista de genes con el nombre buscado. Extraer información de *entry* y *entry name*.

Statistical learning Clase 5 - Yo... x | Curso: Lenguaje de Programac... x | Mi unidad - Google Drive x | UBA52 - Ubiquitin-60S ribosom... x | Los trastornos psicológico... x

← → ↻ uniprot.org/uniprot/P63048

UniProt

UniProtKB

Advanced Search

BLAST Align Retrieve/ID mapping Peptide search SPARQL Help Contact

UniProtKB - P63048 (RL40_BOVIN)

Basket

Display Help video BLAST Align Format Add to basket History Add a publication Feedback

Entry

Publications

Feature viewer

Feature table

None

☒ Function

☒ Names & Taxonomy

☒ Subcellular location

☐ Pathology & Biophysics

☒ Sequences

☒ Interactions

Protein Ubiquitin-60S ribosomal protein L40

Gene UBA52

Organism *Bos taurus* (Bovine)

Status Reviewed - Annotation score: ●●●●● - Experimental evidence at protein levelⁱ

Function

Ubiquitin:
Exists either covalently attached to another protein, or free (unanchored). When covalently bound, it is conjugated to target proteins via an isopeptide bond either as a monomer (monoubiquitin), a polymer linked via different Lys residues of the ubiquitin (polyubiquitin chains) or a linear polymer linked via the initiator Met of the ubiquitin (linear polyubiquitin chains). Polyubiquitin chains, when attached to a target protein, have different functions depending on the Lys residue of the ubiquitin that is linked: Lys-6-linked may be involved in DNA repair; Lys-11-linked is involved in ERAD (endoplasmic reticulum-associated degradation) and in cell-cycle regulation; Lys-29-linked is involved in protein degradation via the proteasome; Lys-48-linked is involved in endocytosis, DNA-damage responses as well as in signaling processes leading to activation of the transcription factor NF-kappa-B. Linear polymer chains formed via attachment by the initiator Met lead to cell signaling. Ubiquitin is usually conjugated to Lys residues of target proteins, however, in rare cases, conjugation to Cys or Ser residues has been observed. When polyubiquitin is free (unanchored-polyubiquitin) it can act as a signaling molecule, such as in activation of protein kinases, and in signaling (By similarity). (By similarity)

We'd like to inform you that we have updated our Privacy Notice to comply with Europe's new General Data Protection Regulation (GDPR) that applies since 25 May 2018.

Do not show this banner again

Activar Windows

Ve a Configuración para activar Windows. [Mostrar todo](#)

ActividadesEstruc....docx ActividadesEstruc....docx ExcelSesion6abril.xlsx

Escribe aquí para buscar

16:19 8/04/2021

5. Extraer la información que corresponde a: **GO - Biological process**

Statistical learning Clase x Curso: Lenguaje de Pro x Mi unidad - Google Dri x UBA52 - Ubiquitin-60S x Los trastornos psic UBA52 - Ubiquitin-60S x

uniprot.org/uniprot/P63048

Display Help video Binding site¹ 72 Activating enzyme 1

Entry

Publications

Feature viewer

Feature table

None

Function

Names & Taxonomy

Subcellular location

Pathology & Biotech

PTM / Processing

Expression

Interaction

Structure

Family & Domains

GO - Molecular functionⁱ

- protein tag Source: GO_Central
- structural constituent of ribosome Source: InterPro
- ubiquitin protein ligase binding Source: GO_Central

Complete GO annotation on QuickGO ...

GO - Biological processⁱ

- modification-dependent protein catabolic process Source: GO_Central
- protein ubiquitination Source: GO_Central
- translation Source: InterPro

Complete GO annotation on QuickGO ...

Keywordsⁱ

Molecular function	Ribonucleoprotein, Ribosomal protein
--------------------	--------------------------------------

Enzyme and pathway databases

Reactome ⁱ	R-BTA-110312, Translesion synthesis by REV1 R-BTA-110320, Translesion Synthesis by POLH R-BTA-1234176, Oxygen-dependent proline hydroxylation of Hypoxia-inducible Factor Alpha R-BTA-1253288, Downregulation of ERBB4 signaling R-BTA-1295596, Spry regulation of FGF signaling R-BTA-156627, L13a-mediated translational silencing of Ceruloplasmin expression R-BTA-1799339, SRP-dependent cotranslational protein targeting to membrane R-BTA-182971, EGFR downregulation R-BTA-187577, SCF(Skp2)-mediated degradation of p27/p21
-----------------------	---

We'd like to inform you that we have updated our Privacy Notice to comply with Europe's new General Data Protection Regulation (GDPR) that applies since 25 May 2018.

Do not show this banner again

Activar Windows

Ve a Configuración para activar Windows. Mostrar todo

ActividadesEstruc....docx

ActividadesEstruc....docx

ExcelSesion6abril.xlsx

Escribe aquí para buscar

16:40 8/04/2021

6. Extraer también la información correspondiente a **Keywords**

The screenshot shows the UniProt entry for P63048. The left sidebar contains a 'Display' section with a 'Feature table' and a list of categories: Function, Names & Taxonomy, Subcellular location, Pathology & Biotech, PTM / Processing, Expression, Interaction, Structure, Family & Domains, Sequence, and Similar proteins. The main content area displays GO annotations for Molecular function and Biological process. The 'Keywords' section is circled in red and lists 'Ribonucleoprotein' and 'Ribosomal protein'. Below this, the 'Enzyme and pathway databases' section lists various Reactome pathways.

Display [Help video](#)

Entry

Publications

Feature viewer

Feature table

None

☒ Function

☒ Names & Taxonomy

☒ Subcellular location

☐ Pathology & Biotech

☒ PTM / Processing

☒ Expression

☒ Interaction

☒ Structure

☒ Family & Domains

☒ Sequence

☒ Similar proteins

GO - Molecular functionⁱ

- protein tag [Source: GO_Central](#)
- structural constituent of ribosome [Source: InterPro](#)
- ubiquitin protein ligase binding [Source: GO_Central](#)

[Complete GO annotation on QuickGO ...](#)

GO - Biological processⁱ

- modification-dependent protein catabolic process [Source: GO_Central](#)
- protein ubiquitination [Source: GO_Central](#)
- translation [Source: InterPro](#)

[Complete GO annotation on QuickGO ...](#)

Keywordsⁱ

Molecular function: Ribonucleoprotein, Ribosomal protein

Enzyme and pathway databases

Reactomeⁱ

- R-BTA-110312, Translesion synthesis by REV1
- R-BTA-110320, Translesion Synthesis by POLH
- R-BTA-1234176, Oxygen-dependent proline hydroxylation of Hypoxia-inducible Factor Alpha
- R-BTA-1253288, Downregulation of ERBB4 signaling
- R-BTA-1295596, Spry regulation of FGF signaling
- R-BTA-1358803, Downregulation of ERBB2:ERBB3 signaling
- R-BTA-156827, L13a-mediated translational silencing of Ceruloplasmin expression
- R-BTA-1799339, SRP-dependent cotranslational protein targeting to membrane
- R-BTA-180031, EGFR downregulation

We'd like to inform you that we have updated our [Privacy Notice](#) to comply with Europe's new General Data Protection Regulation (GDPR) that applies since 25 May 2018.

Activate Windows
Go to Settings to activate Windows.

Do not show this banner again

La información correspondiente a **keywords** puede variar por ejemplo para: **cip2a** bos **Taurus**

