20200505 - Esercitazione Enzimi



Cercare con Google Brenda Enzyme:

Technische Universität 🗉

Accedere a <u>https://www.brenda-enzymes.info/</u> e inserire il numero dell'enzima che avete scelto la volta scorsa (o un altro a scelta) nella casella di ricerca e premere **start search**

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A questo punto avrete accesso alla pagina relativa all'enzima scelto e cliccando sul EC number:



Si accede alla scheda dell'enzima (dell'attività enzimatica):

BRENDA home Bilistory show all hide all No of entries	The Comprehensive Enzyme Information System					
Enzyme Structure 32k Enzyme Structure 32k	Information on EC 5.3.1.9 - glucose-6-phosphate isomerase for references in articles please use BRENDA:EC5.3.1.9 EC Tree					
Applications 14	IUBMB Comments Also catalyses the anomerization of D-glucose 6-phosphate.					
External Links	Specify your search results Mark a special word or phrase in this record: Markt Search Reference ID: Search Search UniProt Accession: Search Select one or more organisms in this record: Search Arbit mellifera Arabidopsis thaliana Archaeoglobus fulgidus Image: Comparison of the second o					
	The expected taxonomic range for this enzyme is: Archaea, Eukaryota, Bacteria					
	Reaction Schemes hide D-Glucose 6-phosphate = D-fructose 6-phosphate					
Questa scheda permette di avere tutte le informazioni conosciute sull'enzima:						
Organismo nel	Organismo nel quale l'enzima è presente					

Diverse sotto-schede con i parametri propri dei diversi isoenzimi con lo stesso EC number

Apriamo la scheda Functional Parameters cliccando su +

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Enzyme Nomenclature	150 BRENDA	qlycolysis				
Enzyme-Ligand Interactions	335 KEGG	Amino sugar and nucleotide sugar metabolism, Biosynthesis of antibiotics, Biosynthesis of secondary metabolites, Glycolysis / Gluconeogenesis, Microbial metabolism in diverse environments, Pentose phosphate pathway, Starch and sucrose metabolism				
Diseases Functional Parameters KM Values Turnover Numbers kcat/KM Values Ki Values	752 MetaCyc 437 171 71 36 42	1,3-propanediol biosynthesis (engineered), 1,5-anhydrofructose degradation, Bifidobacterium shunt, chitin biosynthesis, D-sorbitol biosynthesis I, formaldehyde oxidation I, GDP-mannose biosynthesis, gluconeogenesis I, gluconeogenesis II (Methanobacterium thermoautotrophicum), gluconeogenesis III, glycolysis I (from glucose 6-phosphate), glycolysis III (from photosyn glucose), glycolysis V (Pyrococcus), heterolactic fermentation, starch biosynthesis, sucrose biosynthesis II, sucrose biosynthesis II, sucrose degradation III (sucrose biosynthesis II, UDP-N-acet)-D-galactosamine biosyn	n ithesis), ose /l-			
IC50 Values Specific Activity pH Optima PH Range Temperature Optima Temperature Range pI Values	4 35 38 8 24 6 2 △ top print	Select items on the left to see more content.				
Organism related Information	184 EXTERNAL ExplorEnz	LINKS (specific for EC-Number 5.3.1.9)				
General Information	25 ExPASy					
	32k KEGG	KEGG				
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Enzyme Structure Molecular Properties	1974					
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Marcando i diversi campi \Box si visualizzano i valori corrispondenti

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Turnover Numbers 71	133	L-talose	Pyrococcus furiosus -			
	additional information	additional information	€ 6 entries			
Specific Activity 35		•				

Scopo dell'esercitazione è individuare valori di K_M e K_i per, rispettivamente, un substrato e un inibitore (possibilmente per lo stesso organismo) usando la tabella espandendola cliccando su additional information

I valori scelti andranno inseriti nel file excel scaricabile dal sito web al link:

www.gsartor.org/pro/didattica/pdf_files/Cinetica2020.xlsx

L'utilizzo del file excel verrà descritto durante l'esercitazione.