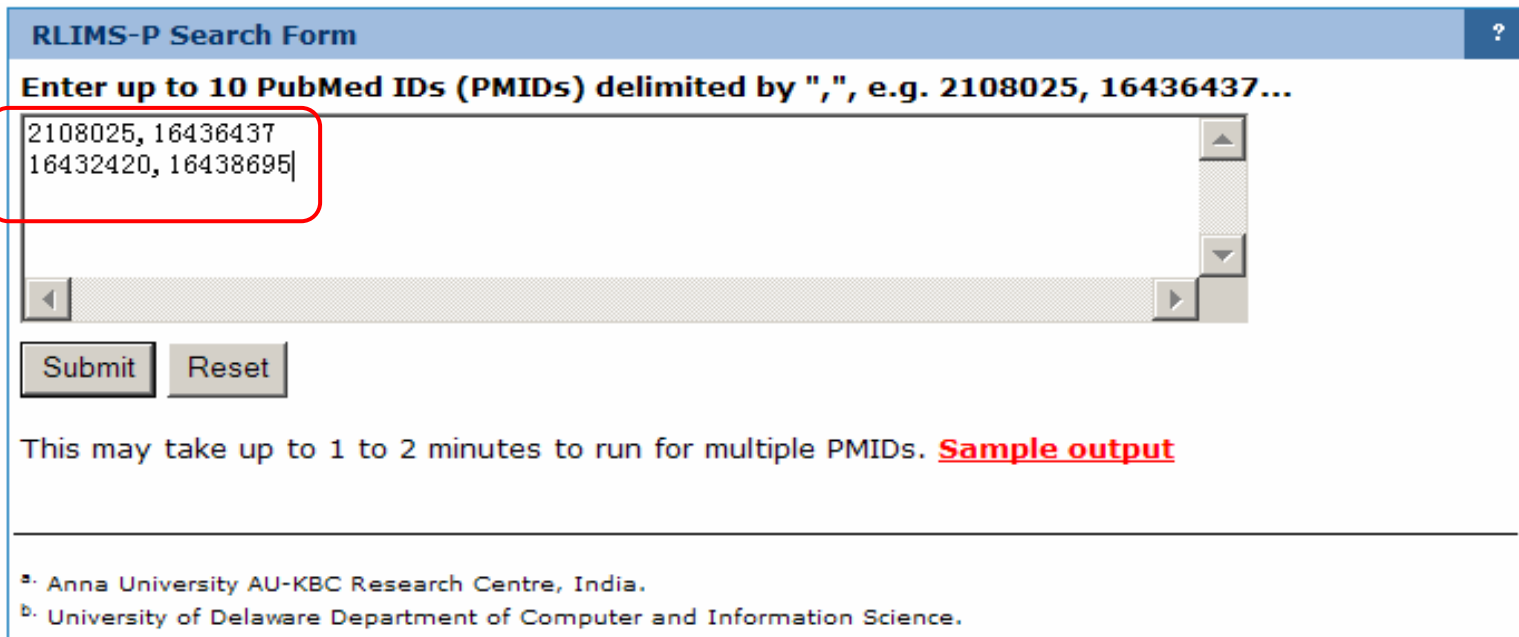


# Online RLIMS-P Search

(Examples: PMID 2108025, 2261989, 16432420, 16438659)

1 cut and paste the PMIDs delimited by “,”



The screenshot shows a web form titled "RLIMS-P Search Form" with a blue header bar. Below the header, there is a text input field with the placeholder text "Enter up to 10 PubMed IDs (PMIDs) delimited by \",\", e.g. 2108025, 16436437...". The input field contains the text "2108025, 16436437" on the first line and "16432420, 16438695" on the second line. Below the input field are two buttons: "Submit" and "Reset". Below the buttons, there is a note: "This may take up to 1 to 2 minutes to run for multiple PMIDs. [Sample output](#)". At the bottom of the form, there are two footnotes: "a. Anna University AU-KBC Research Centre, India." and "b. University of Delaware Department of Computer and Information Science." A red circle with the number "1" and a red arrow points to the input field.

# Online RLIMS-P text-mining result A: Summary Table

2 Select the ones to see the full reports

Top-ranking phosphorylation annotation for PMID 2108025

RLIMS-P Summary Table				
Abstract(s) with protein phosphorylation. One top hit is displayed for each abstract. Go to <a href="#">Text Evidence</a> for full report.				
<input type="checkbox"/> PubMed ID	Protein Kinase	Phosphorylated Protein (Substrate)	Phosphorylation Site	ALL HITS
<input checked="" type="checkbox"/> <a href="#">2108025</a>	phosphorylase kinase	rabbit skeletal muscle phosphorylase kinase	serine972;serine1007;serine985;	<a href="#">Text Evidence</a>
<input checked="" type="checkbox"/> <a href="#">16436437</a>	PknB	PBPA	Thr362;Thr437;	<a href="#">Text Evidence</a>

Abstract(s) with no protein phosphorylation found. PubMed ID: [16432420](#), [16438695](#)

No phosphorylation found in the abstracts

3 Click to see individual full report

# Online RLIMS-P text-mining result B: Full Report

4 To tag the abstract by Biothesaurus

RLIMS-P Summary Table			
Abstract(s) with protein phosphorylation. One top hit is displayed for each abstract. You can also tag terms of <b>BioThesaurus</b> in the following abstract. <span style="border: 1px solid red; padding: 2px;">BioThesaurus</span>			
Text Evidence (PubDate)	Protein Kinase	Phosphorylated Protein (Substrate)	Phosphorylation Site
<a href="#">16436437</a> (2006/Feb)	PknB	PBPA	Thr 362; Thr 437

PubMed Information			
PubMed ID	Publication Date	Authors	Journal
<a href="#">16436437</a>	2006/Feb	Dasgupta A , Datta P , Kundu M , Basu J	Microbiology

Name Mapping to UniprotKB	
<input type="radio"/> Protein name from abstract:	<span style="border: 1px solid red; padding: 2px;">PBPA</span> <input type="button" value="Name Mapping"/>
<input type="radio"/> User-specified protein name:	<input type="text"/>

Annotation			
No.	Protein Kinase	Phosphorylated Protein (Substrate)	Phosphorylation Site
1	PknB	PBPA	Thr 362; Thr 437
2	The serine/threonine kinase PknB	PBPA	N/A

Text Evidence
<b>TI</b> - The serine/threonine kinase PknB of Mycobacterium tuberculosis PHOSphorylates PBPA, a penicillin-binding protein required for cell division.
<b>AB</b> - A cluster of genes encoded by ORFs Rv0014c-Rv0018c in Mycobacterium tuberculosis encodes candidate cell division proteins RodA and Mycobacterium tuberculosis encodes candidate cell division proteins PBPA, a pair of serine/threonine kinases ( STPKs ), PknA and PknB and a phosphatase, PstP. The organization of genes encompassing this region is conserved in a large number of mycobacterial species. This study demonstrates that recombinant PBPA of M.tuberculosis binds benzylpenicillin. Knockout of its counterpart in M.smegmatis resulted in hindered growth and defective cell septation. The phenotype of the knockout ( PBPA-KO ) could be restored to that of the wild-type upon expression of PBPA of M.tuberculosis. PBPA localized to the division site along with newly synthesized peptidoglycan, between segregated nucleoids. In vivo coexpression of PBPA and PknB, in vitro kinase assays and kinase site -specific mutagenesis substantiated the view that PknB PHOSphorylates PBPA on Thr362 and Thr437. A T437A mutant {VP_act_neg}-could not complement PBPA-KO. These studies demonstrate for the first time that PBPA, which belongs to a subclass of class B high-molecular-mass PBPs, plays an important role in cell division and cell shape maintenance. Signal transduction mediated by PknB and PstP likely regulates the positioning of this PBP at the septum, thereby regulating septal peptidoglycan biosynthesis.

Tag Protein Kinase    Tag Protein Substrate    Tag Phosphorylation Site    Tag BioThesaurus

5

6

7

8

9

5

6

8

PubMed information

Name mapping to UniProtKB entry containing the citation PBPA

All the phosphorylation annotations in the ranking order

Tagged abstract

# Find the UniProtKB entry using BioThesaurus

search  AND

Display Options

10 proteins | 1 page | 50 / page | Save Result As:

3LAST  FASTA  Pattern Match  Multiple Alignment  Domain Display

<input type="checkbox"/>	UniProtKB AC/ID	UniProtKB Protein Name	Organism Name	No. of Synonyms / Text Variants	PIRSF ID	Matched Fields
<input type="checkbox"/>	Q65HB5/Q65HB5_BACLD <small>/ProClass UniProtKB/TrEMBL</small>	PbpA <small>BioThesaurus</small>	<a href="#">Bacillus licheniformis (strain DSM 13 / ATCC 14580)</a>	1 / 2	<a href="#">PIRSF0028C1</a>	UniProtKB Protein Name=>PbpA
<input type="checkbox"/>	Q97AR6/Q97AR6_I1S1N <small>/ProClass UniProtKB/TrEMBL</small>	PhpA protein <small>BioThesaurus</small>	<a href="#">Listeria innocua</a>	4 / 4		UniProtKB Protein Name=>PbpA
<input type="checkbox"/>	Q8Y610/Q8Y610_LISMO <small>/ProClass UniProtKB/TrEMBL</small>	PbpA protein <small>BioThesaurus</small>	<a href="#">Listeria monocytogenes</a>	3 / 3		UniProtKB Protein Name=>PbpA
<input type="checkbox"/>	Q7U306/Q7U306_MYCEO <small>/ProClass UniProtKB/TrEMBL</small>	PROBABLE PENICILLIN-BINDING PROTEIN PBPA <small>BioThesaurus</small>	<a href="#">Mycobacterium bovis</a>	2 / 3		UniProtKB Protein Name=>PBPA
<input type="checkbox"/>	Q744R3/Q744R3_MYCPA <small>/ProClass UniProtKB/TrEMBL</small>	PbpA <small>BioThesaurus</small>	<a href="#">Mycobacterium paratuberculosis</a>	1 / 2		UniProtKB Protein Name=>PbpA
<input type="checkbox"/>	Q50185/Q50185_MYCLE <small>/ProClass UniProtKB/TrEMBL</small>	PbpA <small>BioThesaurus</small>	<a href="#">Mycobacterium leprae</a>	2 / 3		UniProtKB Protein Name=>PbpA
<input type="checkbox"/>	Q9L656/Q9L656_STRGR <small>/ProClass UniProtKB/TrEMBL</small>	PbpA <small>BioThesaurus</small>	<a href="#">Streptomyces griseus</a>	1 / 1		UniProtKB Protein Name=>PbpA
<input type="checkbox"/>	Q7ET32/Q7BT32_STRCL <small>/ProClass UniProtKB/TrEMBL</small>	Pericillin binding protein PbpA <small>BioThesaurus</small>	<a href="#">Streptomyces clavuligerus</a>	2 / 3		UniProtKB Protein Name=>PbpA
<input type="checkbox"/>	P71586/P71586_MYCTU <small>/ProClass UniProtKB/TrEMBL</small>	PROBABLE PENICILLIN-BINDING PROTEIN PBPA (Penicillin-binding protein, putative) <small>BioThesaurus</small>	<a href="#">Mycobacterium tuberculosis</a>	5 / 7		UniProtKB Protein Name=>PBPA
<input type="checkbox"/>	Q6AKH3/Q6AKH3_DESPS <small>/ProClass UniProtKB/TrEMBL</small>	Related to penicillin-binding protein (PbpA) <small>BioThesaurus</small>	<a href="#">Desulfotalea psychrophila</a>	3 / 4		UniProtKB Protein Name=>PbpA)

10

Name mapping results: "PBPA" mapped to 10 entries in UniProtKB. Among them, P71586\_MYCTU is the phosphorylated protein in the abstract of PMID 16436437.