

# Biological Use Cases

## Antibodies

The screenshot displays the CDD Vault interface for antibody registration. The top navigation bar includes 'Overview', 'Batches 1', 'Plates 1', 'Protocols 4', 'Collections 0', 'Projects 1', and 'Files 2'. A 'NO STRUCTURE' indicator is shown on the left. The main content area is titled 'Definition' and includes an 'Edit definition and structure' link. The antibody name is 'LFDBV-0000031'. Below the name, the amino acid sequence is shown: 'DIVLTQSPAIMSASLGERVTMTCTASSSVSSSNLHWYQQKPGSSPKLWIYSTNLSAGVPARFSGSGSGTYSYSLTISMEAEADAATYYCHQYHRSPYTFGGGTKLEIKRADAAPTYSIFPPSSEQLTSGGASVVCFLNNFYPKDINV...'. A list of descriptors for the entity is shown below the sequence, including 'ABS Identification Data', 'ABS UAA Identification Data', 'Dose Response', and 'Single Point Screen with Mutations'. A 'Dose Response' plot is shown at the bottom right, displaying '% rritabon (%)' on the y-axis and 'Concentration (uM)' on the x-axis. The plot shows a sigmoidal curve with an IC50 of 0.502 uM. The plot includes a 'Flag outliers & Override' button and a zoom icon.

Register without structure

Unique sequence or name for duplicate checking  
*Note: 65,000 character limit*

Descriptors for entity

Result data

Store data in protocols

Dose Response  
IC50 (uM) 0.502  
Dose-response Plot

% rritabon (%)

Concentration (uM)

Flag outliers & Override

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## Antibodies

### Organize experiment details in ELN

**PDB files rendered in interactive viewer**

**Draw molecules and register them**

**Image files rendered**

**Add text**  
e.g. references and experiment details

**Attach documents**  
Note: PDF, MS Office and text files are indexed and searchable

*Paper*  
*Structural Basis for Antibody Catalysis of a Disfavored Ring Closure Reaction*  
Karl Gruber§, Bin Zhou§, Kendall N. Houk<sup>1</sup>, Richard A. Lerner§, Charles G. Shevlin§, and Ian A. Wilson\*§<sup>D</sup>  
Departments of Molecular Biology and Chemistry and the Skaggs Institute of Learning, University of California, San Diego, La Jolla, California 92037, and Department of Chemistry and Biochemistry, University of California, San Diego, La Jolla, California 92095  
*Biochemistry*, 1999, 38 (22), pp 7062–7074. DOI:10.1021/bi990210s

*RCSB Full Validation Report*

### Search CDD Vault

**Example query**

Search Saved Searches Collections Antibodies

Protocols ?

In ▾ ABS Identification Data ▾  
(any run) ▾  
Full Chain ▾ contains ▾ WVRQ

and ▾

In ▾ Dose Response ▾  
(any run) ▾  
IC50 (uM) ▾ ≤ ▾ 5.0 ▾ uM  
show all ▾

and ▾

In ▾ ABS Identification Data ▾  
(any run) ▾  
ORGANISM ▾ contains ▾ homo sapiens