

# Dasty

(A Protein DAS client)

17/05/2006

Nisha Vinod

Funded by:



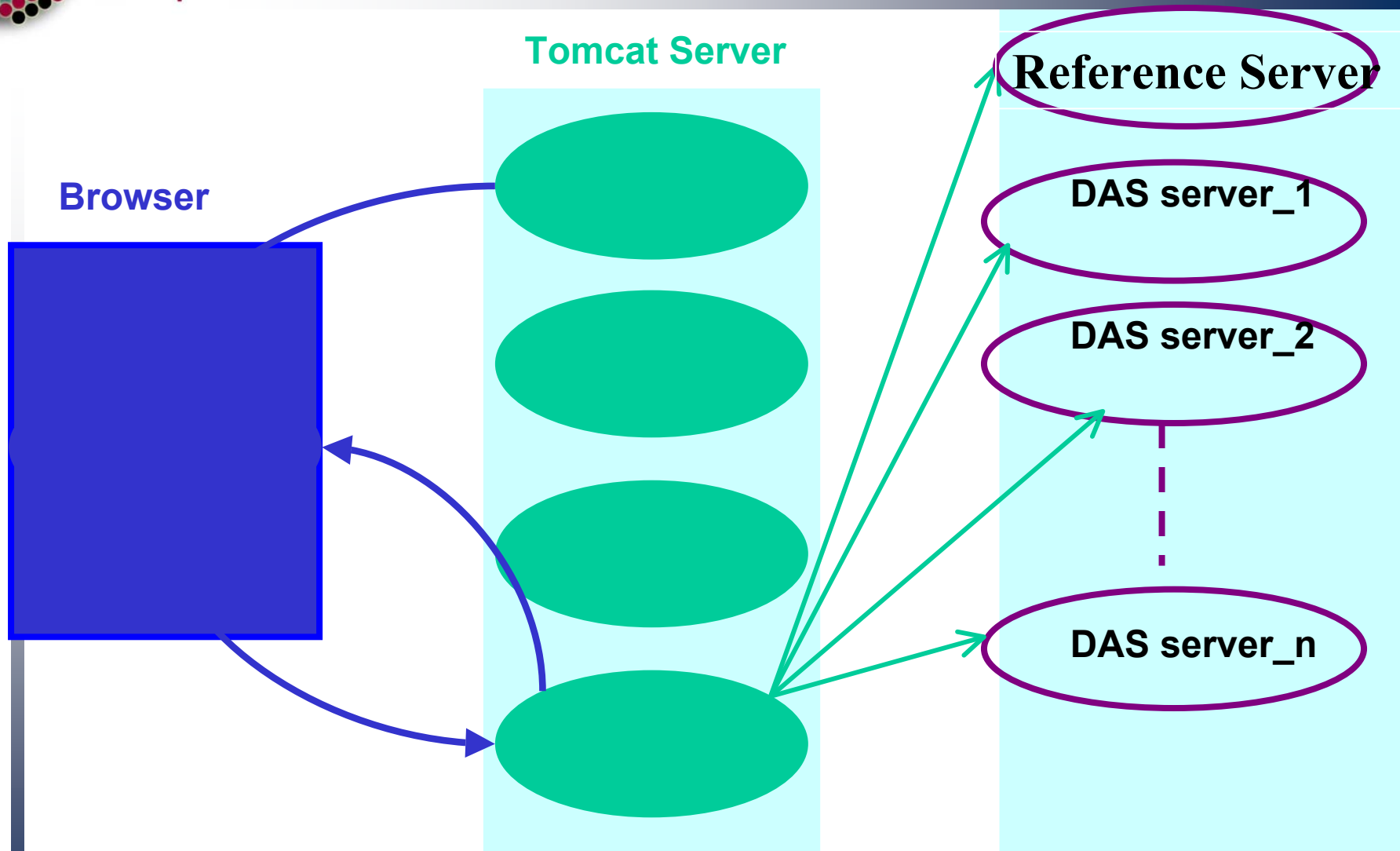
- ① Dasty – an overview
- ② Functionalities
- ③ User Interface



## ➤ A Protein DAS Client

- ❖ Queries various protein DAS Servers and visualizes protein sequence features.
- ❖ Implemented using Macromedia Flash, XML and servlets.





## ➤ Dasty provides

❖ Positional Features

❖ Non Positional Features



## ➤ Zoom and Navigation

- ❖ The user will be able to zoom in and zoom out to view individual features in detail and be able to navigate through.

## ➤ Grouping

- ❖ It will be possible to group features, e.g. display all structural features on one line. This is done by a configuration file.



## ➤ **Sorting**

- ❖ The user will be able to sort features.
  - ✓ By feature type, or
  - ✓ By score

## • **Feature Information**

- ❖ The user will be able to view feature descriptions and type information.



## ➤ **Hyperlinks**

- ❖ Clicking onto any feature positions is linked to the corresponding sites transmitted in the “URL” parameter of the DAS protocol.

## ➤ **Colour coding of features**

- ❖ Mapping of feature types to colours configurable by a configuration file.

## ➤ **Sequence Display**

- ❖ Display of the whole sequence as well as mouse over onto any feature positions shows the relevant sequence highlighted.



## ➤ **Caching**

- ❖ Feature requests are cached

## ➤ **Test a specific DAS server**

- ❖ Testing of a specific DAS server, which is not yet added to the registry.

## ➤ **Version comparison of reference sequence and annotation**

- ❖ Compare and display of a message if the versions of annotations are different from a reference sequence.



## ➤ Can view

- ❖ Protein synonyms
- ❖ Literature references



Dasty

This Protein DAS Client queries protein DAS Servers and visualizes protein sequence features.

For a description of the DAS protocol see <http://www.biodas.org>.

Please enter a protein of interest then press arrow button below.

Example queries:

\* Swiss-Prot ID's (e.g. A4\_HUMAN)

\* UniProt Accession numbers (e.g. Q24488)

To access a specific DAS server please select this box

ACCESSION NUMBER:



Test a  
specific  
server



## Dasty, showing positional features

Dasty

The version from SMART, INTERPRO, servers are different from reference server

**NAME:** Tyrosine-protein kinase transmembrane receptor Ror precursor

**ID:** Q24488

**LENGTH:** 685

**FEATURES**

Positional

Non Positional

Both

**SORT**

Default

Type

Score

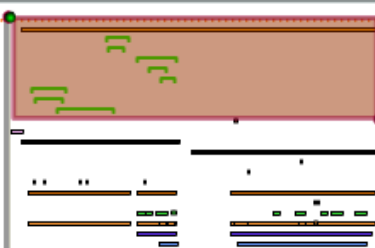
**VIEW**

Compressed

Expanded

Search again

UNIPROT:

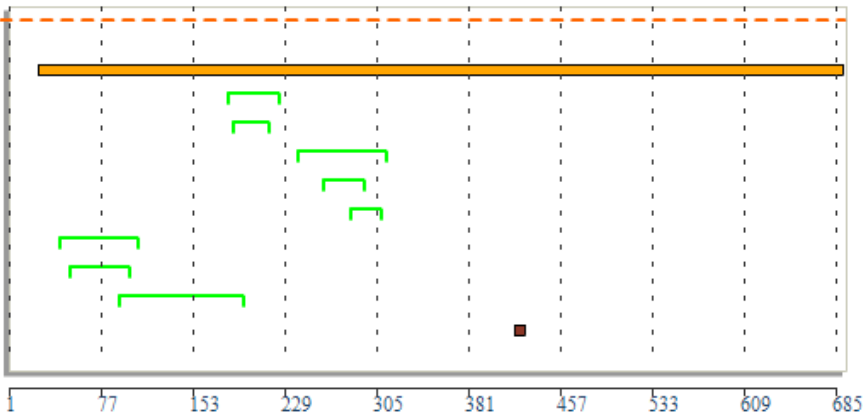


```

MINKYSAFVVCISLVLLFTKKDVGSHNVDSRIY
QQSSGICHYNGTICRDVLSNAHVFPNLTLM
LEERLKAAYGVIKESKDMNANCRMYALPSLC
SMPICRTPERTNLLYFANVATNAKQLKNVSIR
RTKSKDIKNSIFKFKKSTIYEDVFSTDISSKYPT
EENLKRICREECELLENELCQKEYAIAKRHPV
VGVEDCQKLPQHKDCLSLGITIEVDKTEENCYV
GSTYRGVANVSASGKPLRWSWLMKEISDF
LIGQNYCRNPGSVENSPWCFVDSRERIELCI
    
```

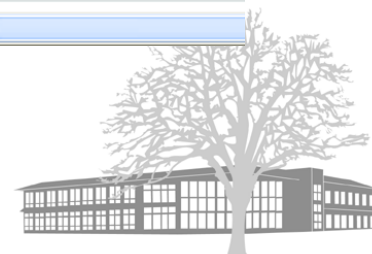
UNIPROT:

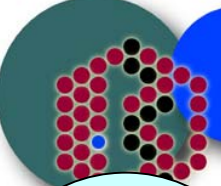
CHAIN  
DISULFID  
DISULFID  
DISULFID  
DISULFID  
DISULFID  
DISULFID  
DISULFID  
DISULFID  
DISULFID  
NP\_BIND



Tyrosine-protein kinase transmembrane receptor Ror/FTId=PRO\_0000024462

Type: CHAIN Position: 25 - 685 Score: -





# EMBL-EBI

European Bioinformatics Institute

# Dasty, showing Positional features

Sequence check, shows a message

Overview of positional

Pro inform (na id,le

**Dasty**  
The version from SMART, INTERPRO, servers are different from reference server

**NAME:** Tyrosine-protein kinase transmembrane receptor Ror precursor

**UNIPROT:** [UNIPROT ID]

**ID:** Q24488

**LENGTH:** 685

**VIEW:**  Compressed  Expanded

**RES:**  Signal  Non Positonal  Both

**SORT:**  Default  Type  Score

**Sequence:**  
M NKYSAFIVCISLVLLFTKKDVGSHNVDSRY  
QQSSGICHYNGTICRDVLSNAHVFSPLNLT  
LEERLKAAYGVIKESKDMNANCRMYALPSLC  
SMPICRTPERTNLLYFANVATNAKQLKIVSIR  
RTKSKDIKINISFKKKSTTYEDVFDISSKYPT  
ESENLRKRICREECELLENELCQKEYAIAKRHPV  
VGVEDCQKLPQHKDCLSLGITIEVDKTENCYV  
GSTYRGVANVVSASGKPLRWSWLMKEISDF  
LIGQNYCRNPGSVENSPWCFVSSRRIELCI

**Detailed view:**  
CHAIN  
DISULFID  
DISULFID  
DISULFID  
DISULFID  
DISULFID  
DISULFID  
DISULFID  
DISULFID  
NP\_BIND

**Tyrosine-protein kinase transmembrane receptor Ror/FTId=PRO\_0000024462**  
Type: CHAIN Position: 25 - 685

Server name

Feature options

View Options

Search again, with another accession

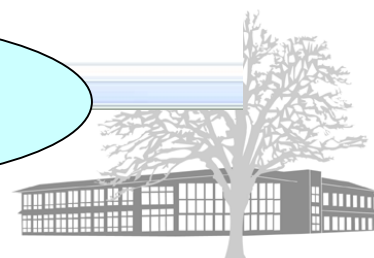
Detailed view Showing features covered by the clip

Roll over showing detailed information

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## Dasty, showing positional features

Dasty

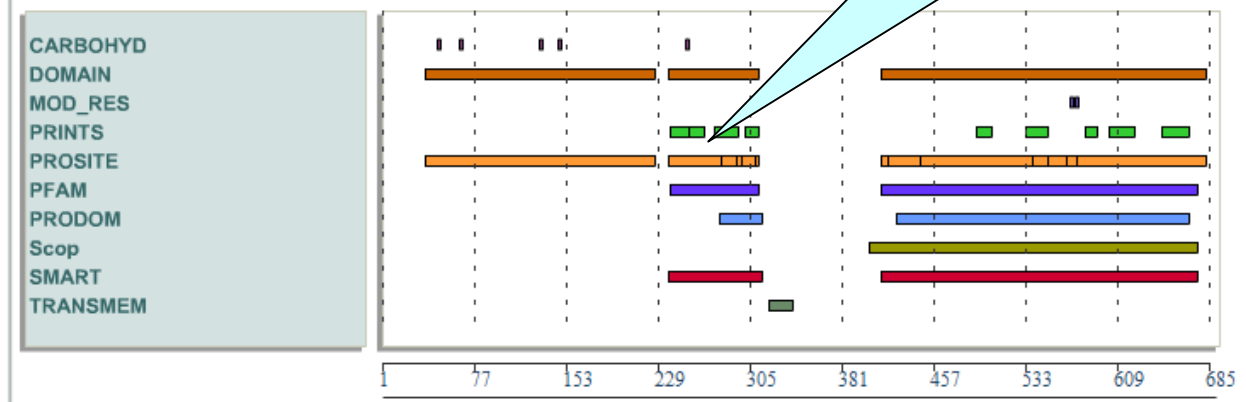
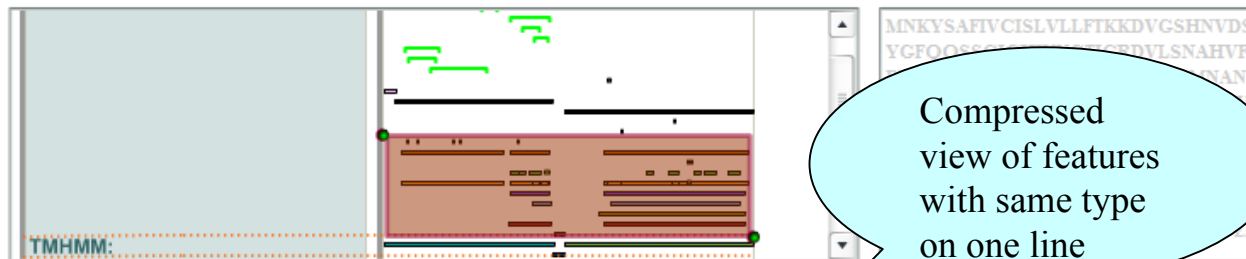
The version from SMART, INTERPRO, servers are different from reference server

NAME: Tyrosine-protein kinase  
transmembrane receptor Ror  
precursor

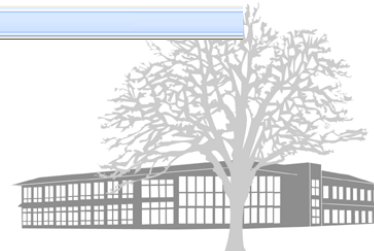
ID: Q24488  
LENGTH: 685

FEATURES SORT  
 Positional  Default  
 Non Positional  Type  
 Both  Score

VIEW  
 Compressed   
 Expanded



Roll over onto feature positions shows information in here



## Dasty, showing positional features

**Dasty** The version from SMART, INTERPRO, servers are different from reference server

---

**NAME:** Tyrosine-protein kinase transmembrane receptor Ror precursor

**ID:** Q24488

**LENGTH:** 685

**FEATURES**

Positional     Default

Non Positional     Type

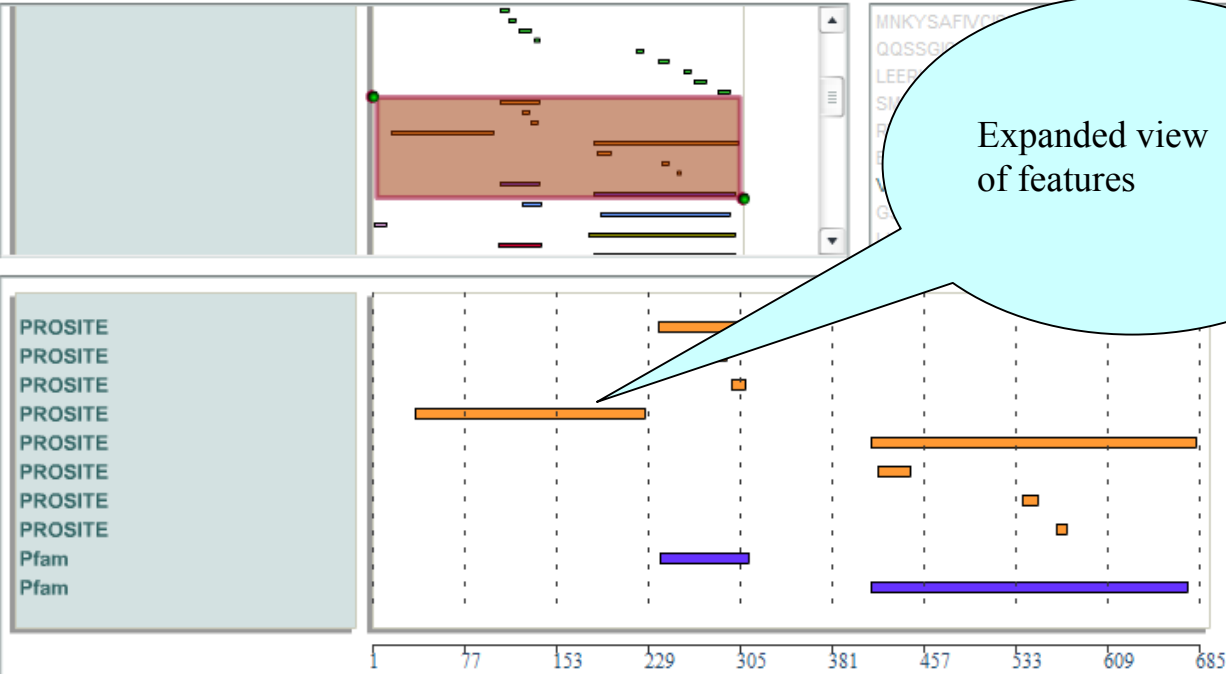
Both     Score

**VIEW**

Compressed

Expanded

Search again



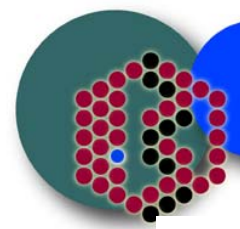
**Expanded view of features**

PROSITE  
PROSITE  
PROSITE  
PROSITE  
PROSITE  
PROSITE  
PROSITE  
PROSITE  
Pfam  
Pfam

1    77    153    229    305    381    457    533    609    685

Roll over onto feature positions shows information in here





## Dasty - The Uniprot DAS Client

Help

NAME: Tyrosine-protein kinase  
transmembrane receptor  
Ror precursor

ID: Q24488

LENGTH: 685

### FEATURES

- Positional
- Non Positional
- Both

### SORT

- Default
- Type
- Score

Search again

<pre> aristotle: Q24488 pubmed:8394009 pubmed:10731132 pubmed:12537572 pubmed:9731193 </pre>	<pre> Tyrosine-protein kinase transmembrane receptor Ror precursor EC 2.7. Wilson C., Goberdhan D.C.I., Steller H. 1993. "Dror, a potential neu Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D., Aman Misra S., Crosby M.A., Mungall C.J., Matthews B.B., Campbell K.S., H Oates A.C., Wollberg P., Achen M.G., Wilks A.F. 1998. "Sampling the </pre>
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**Henning Hermjakob, Ernst Kretschnann,  
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Stephen Robinson and Philip Jones**

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THANK YOU

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