

UniProtKB

Human reviewed proteome
(Canonical isoform)
20,380 protein entries

Add UniParc
annotations

Extract PTM
evidence

Combine cross-
reference
annotations

UniProt PTM sites

UniProt annotation (core)

20,203 entries with HGNC gene symbol

PhosphoSitePlus (PSP)

Protein sequence
(UniProt-like)

Build
protein
sequence
mapping

PTM sites
Acetyl/Phospho/
Methyl/SUMO/Ubiquityl

Download PTM
site tables

Retrieve PTM
evidence

Map protein
coordinates

PSP PTM sites

CPTAC/ICPC

Protein sequence
(RefSeq)

Add
cross-ref.
(HGNC/
UniParc)

Build
protein
sequence
mapping

Published
proteomic datasets

Standardize
sample and
PTM metadata

Add RefSeq
annotation

Map protein
coordinates

CPTAC/ICPC PTM data

UniParc
Sequence archive

HGNC
Gene symbols

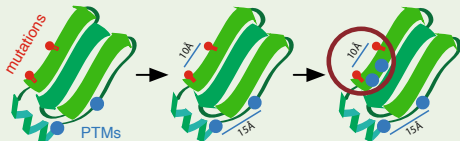
PDB
Protein structures

InterPro/Pfam
Protein domain

OmniPath
Pathways and
complex members

TCGA MC3
Somatic mutations

PTM-mutation spatial clusters (HotPTM)



Map data to structure

Calculate 3D distance

Identify clusters



PTMcosmos

PTM prioritization based on literature support

PTM abundance difference across subtypes

Upstream/downstream members analysis

Mutational impact on PTM

PTM crosstalks

