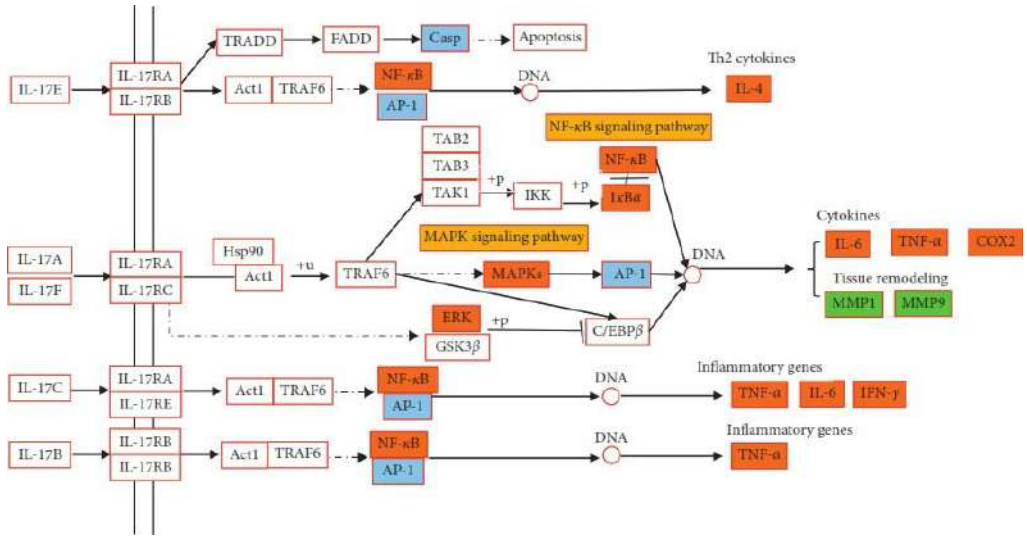
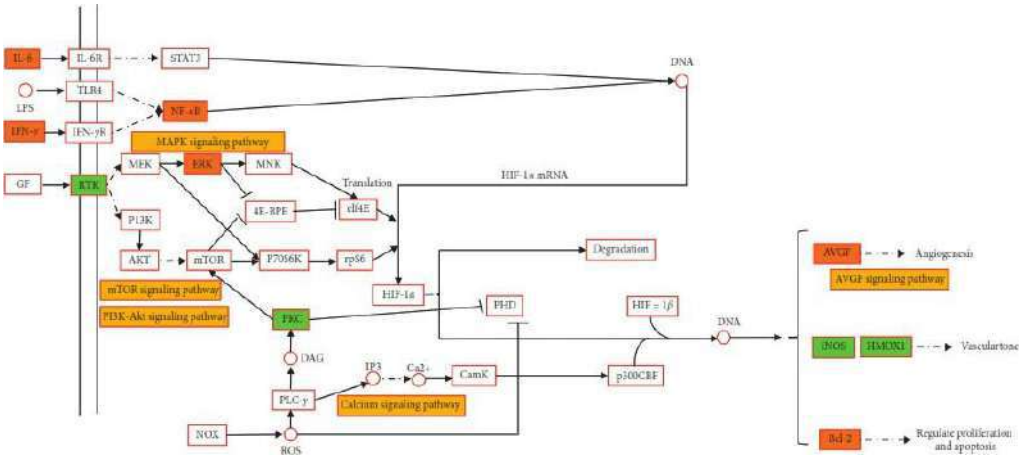
LAMPIRAN

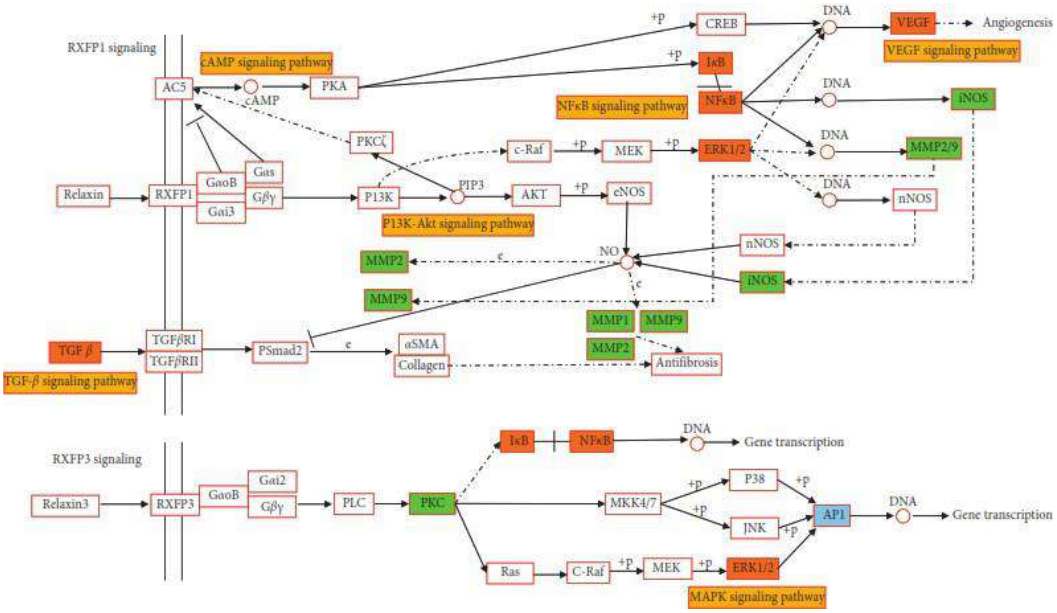
Lampiran 1 Identifikasi protein yang terlibat dalam patofisiologi hiperurikemia dan gout



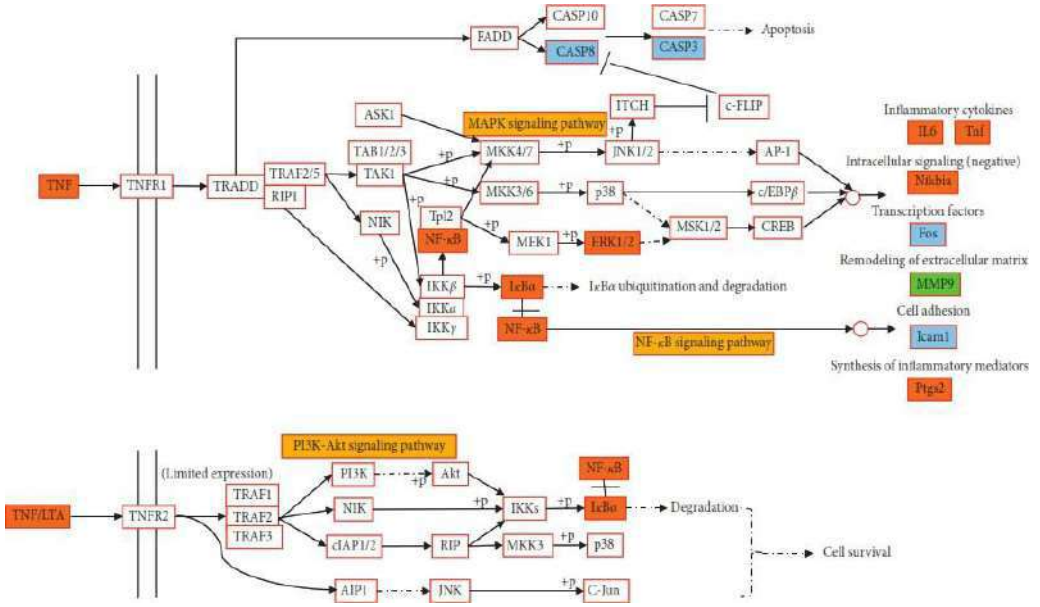
IL-17 Signaling Pathway



HIF-1 Signaling Pathway



Relaxin Signaling Pathway



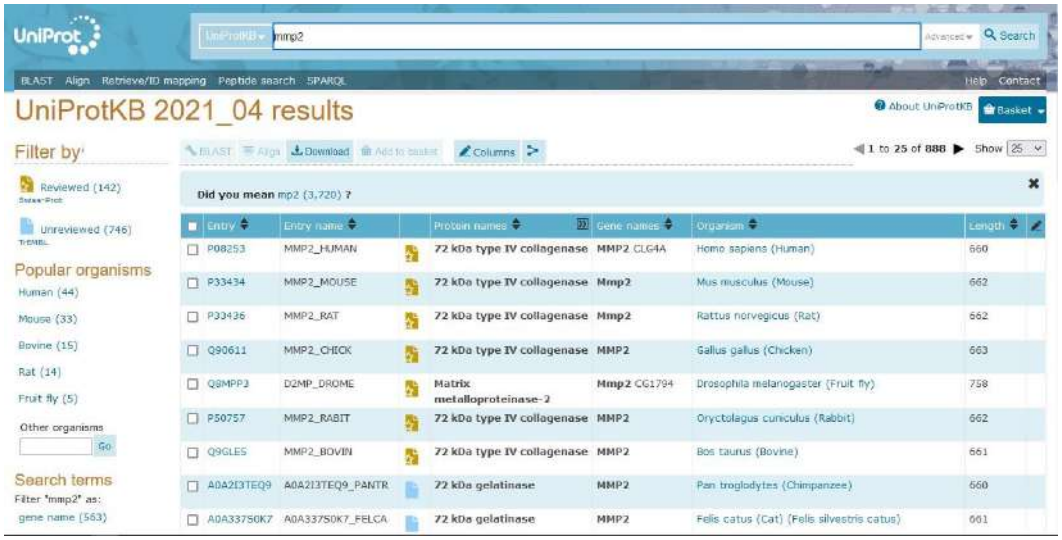
TNF Signaling Pathway

Lampiran 2 Validasi nama gen

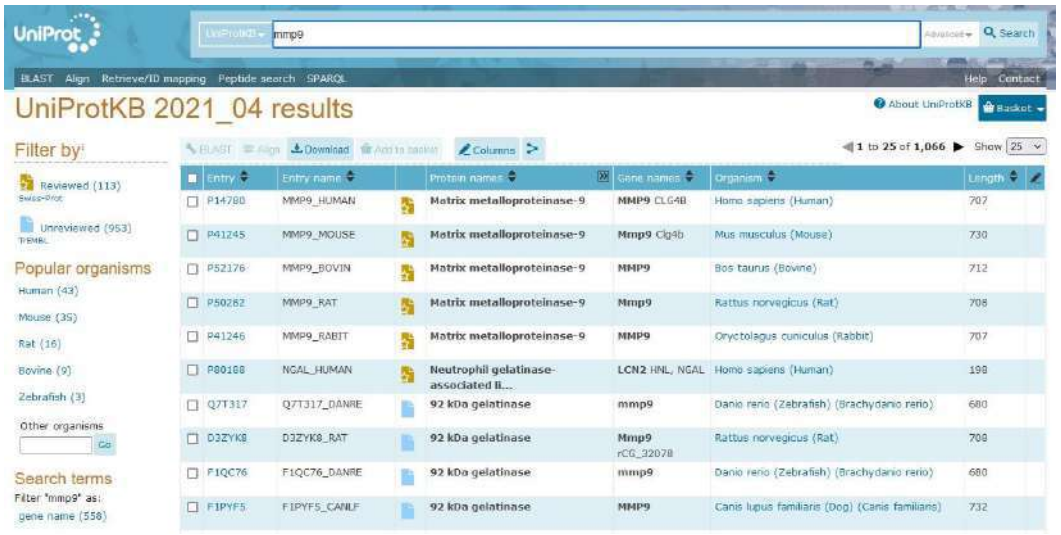
ATP-binding cassette sub-family G member 2

Hypoxia-inducible factor 1-alpha

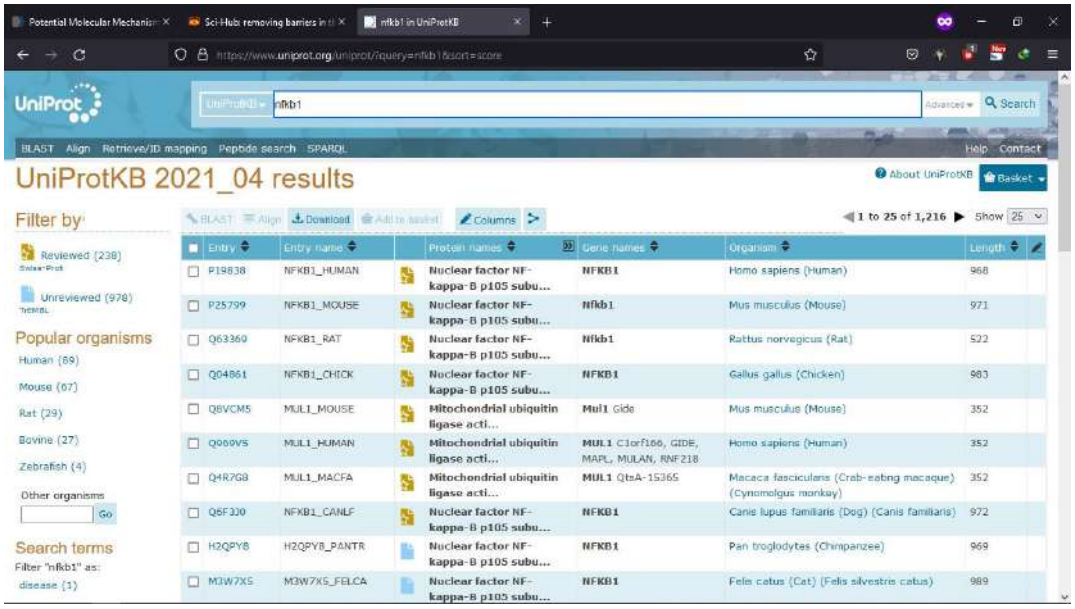
Interferon Gamma



72 kDa type IV collagenase



Matrix metalloproteinase 9

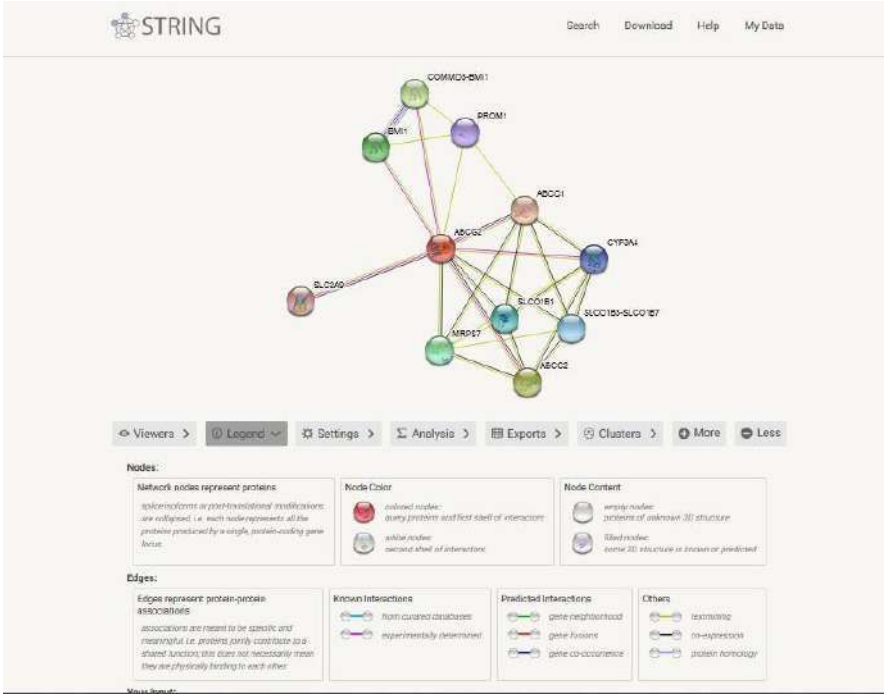


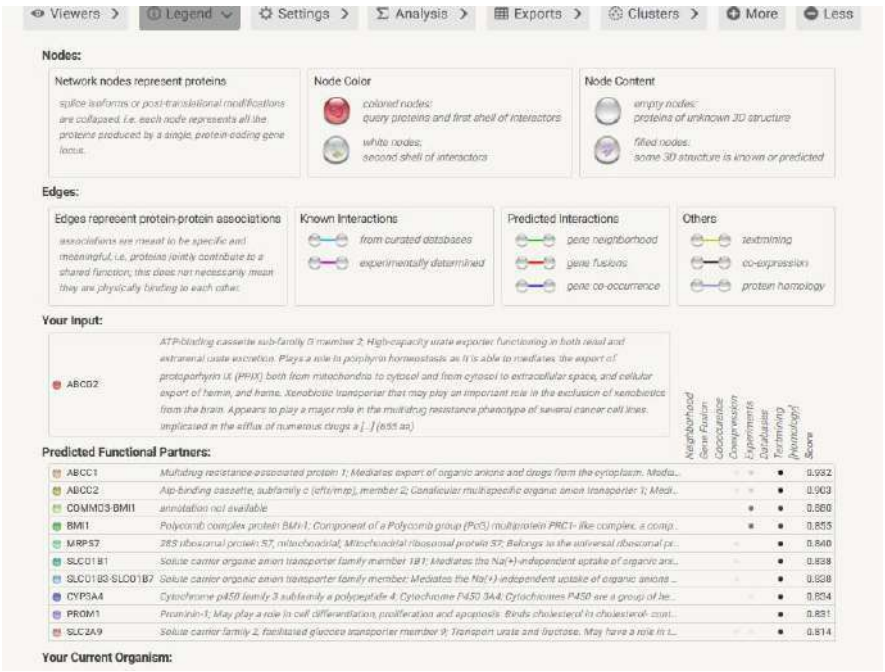
Nuclear factor NF-kappa-B p105 subunit

Prostaglandin G/H synthase 2

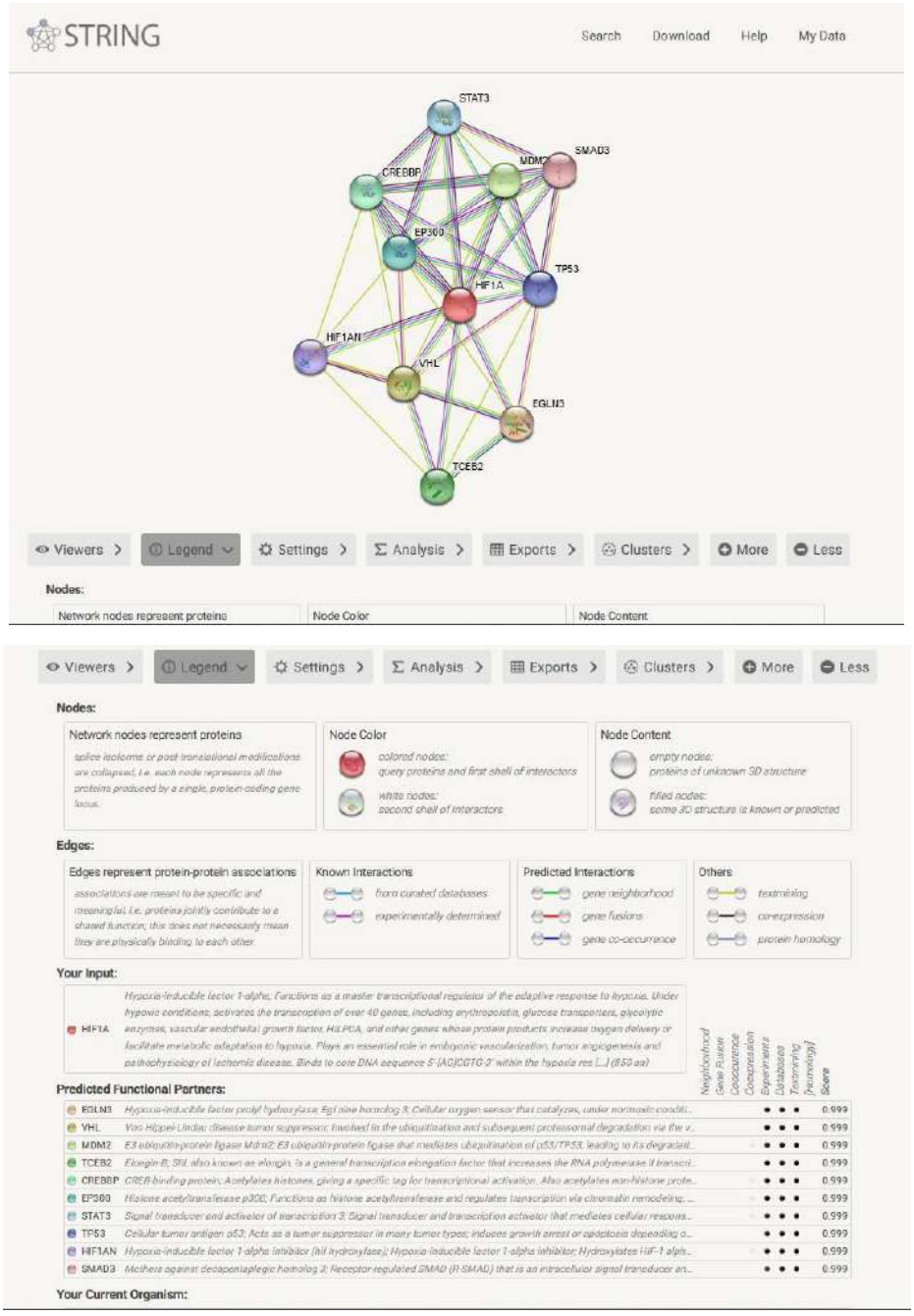
Xanthine dehydrogenase/oxidase

Lampiran 3 Pencarian interaksi protein-protein

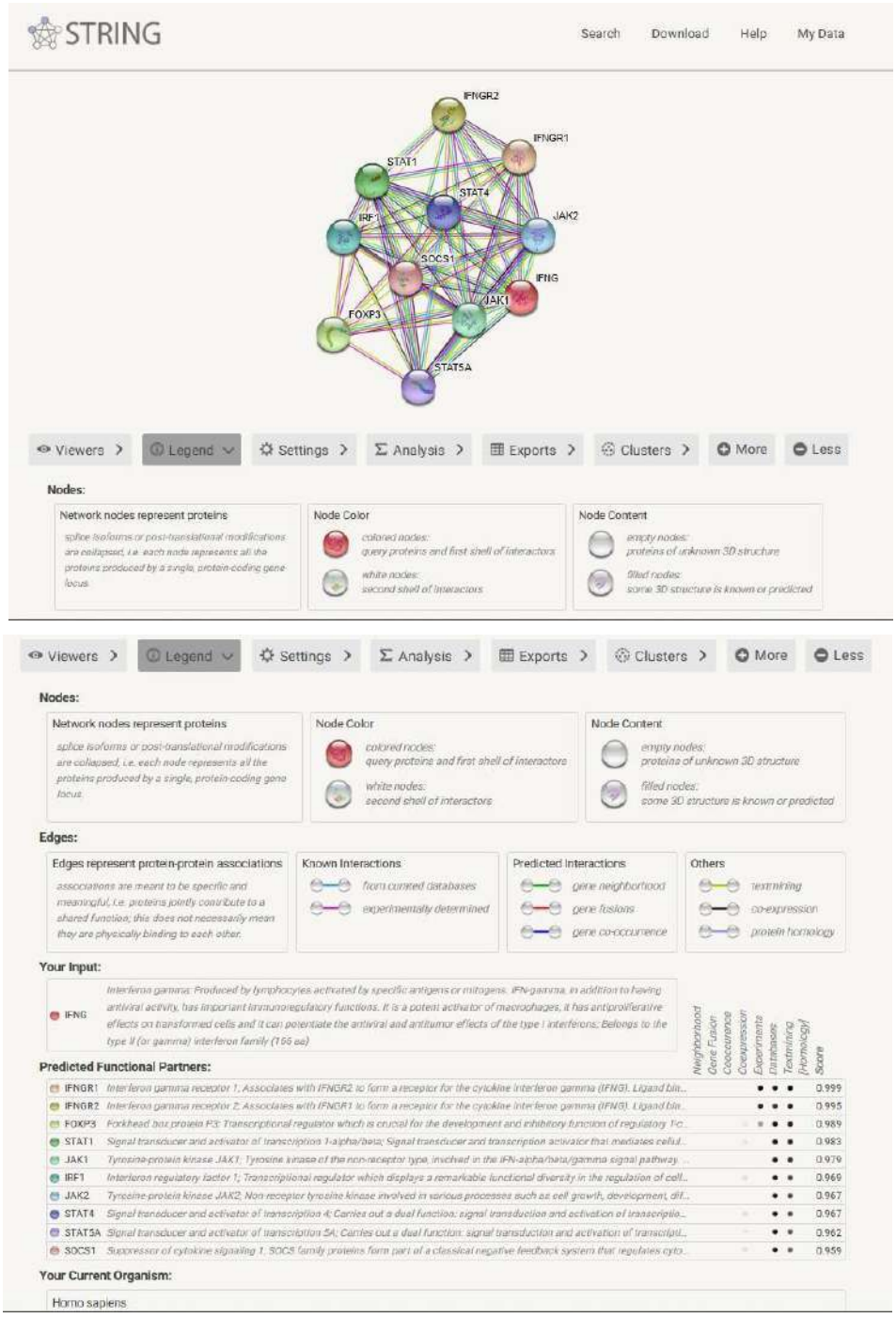




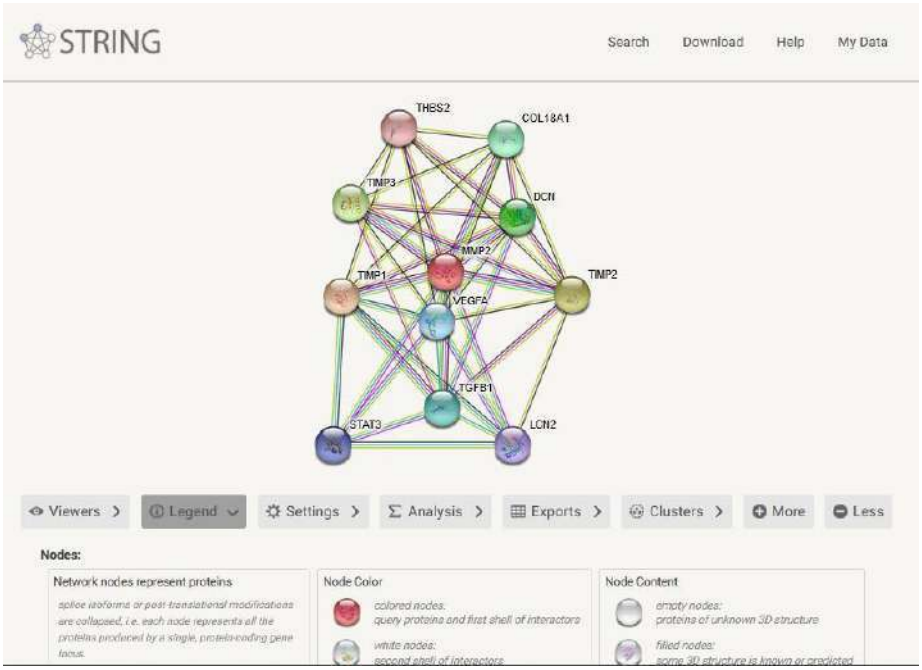
ATP-binding cassette sub-family G member 2

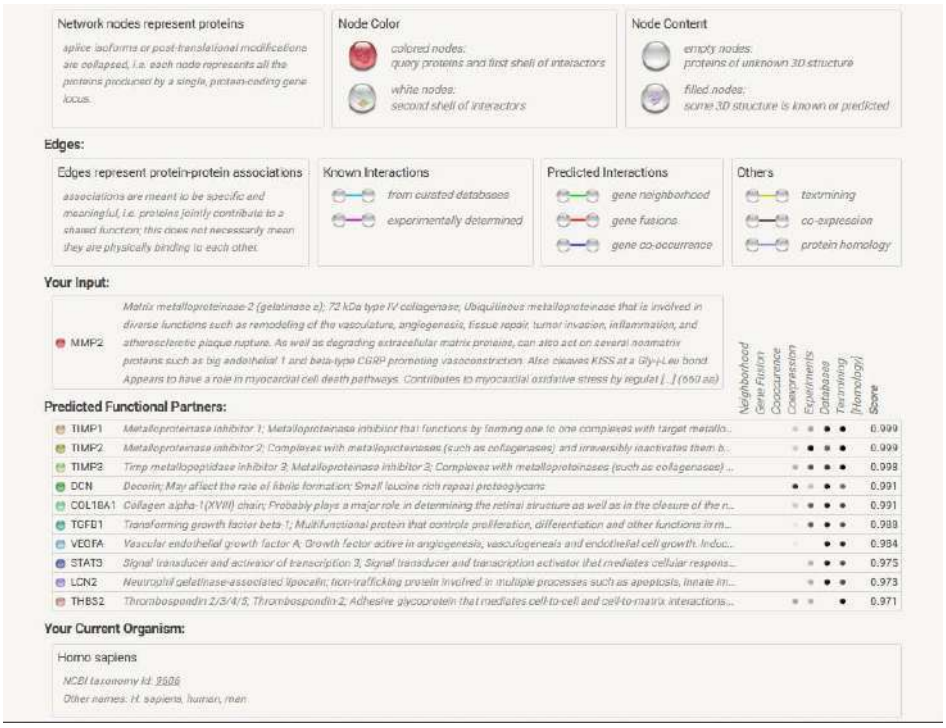


Hypoxia-inducible factor 1-alpha

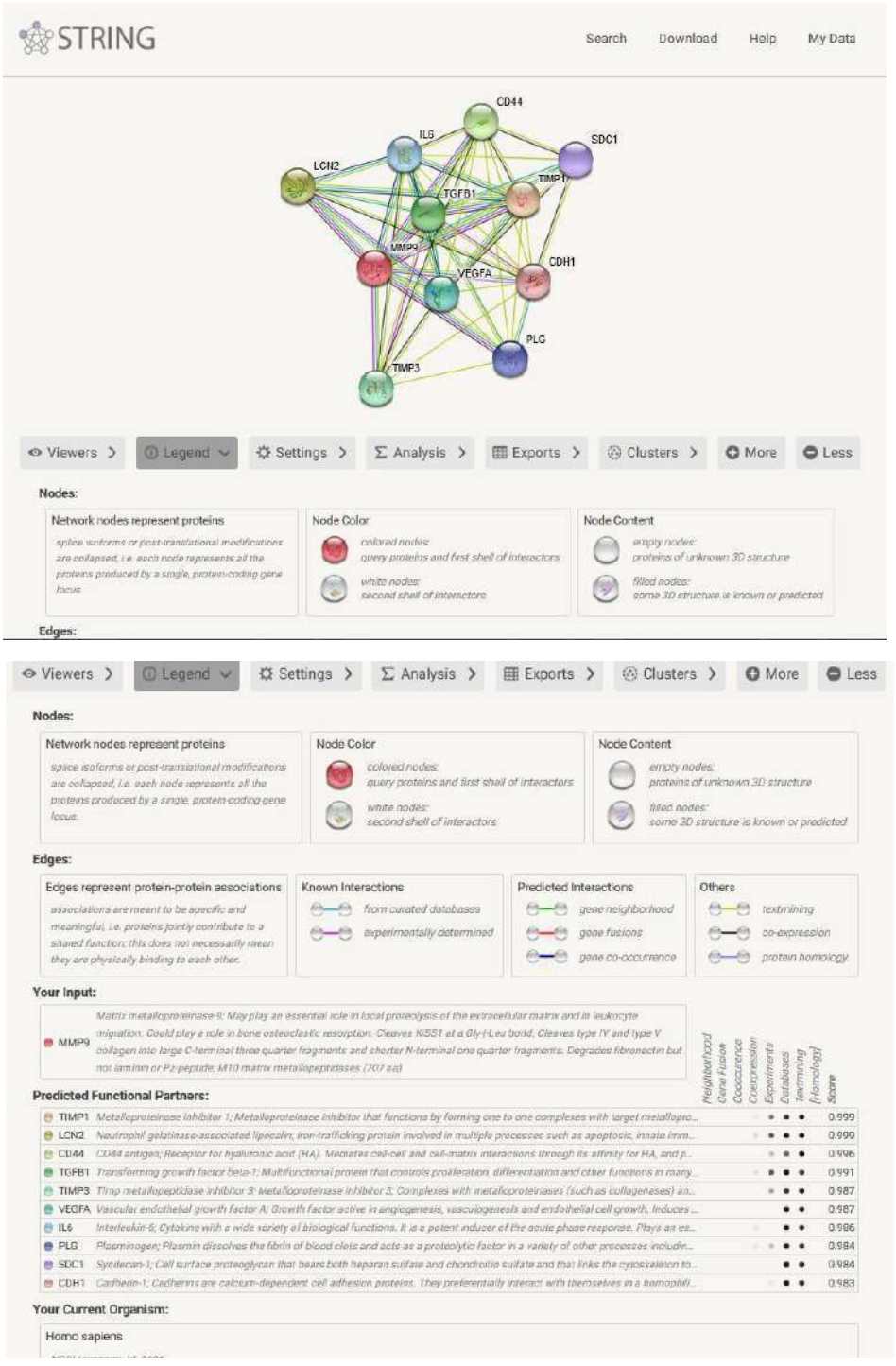


Interferon Gamma

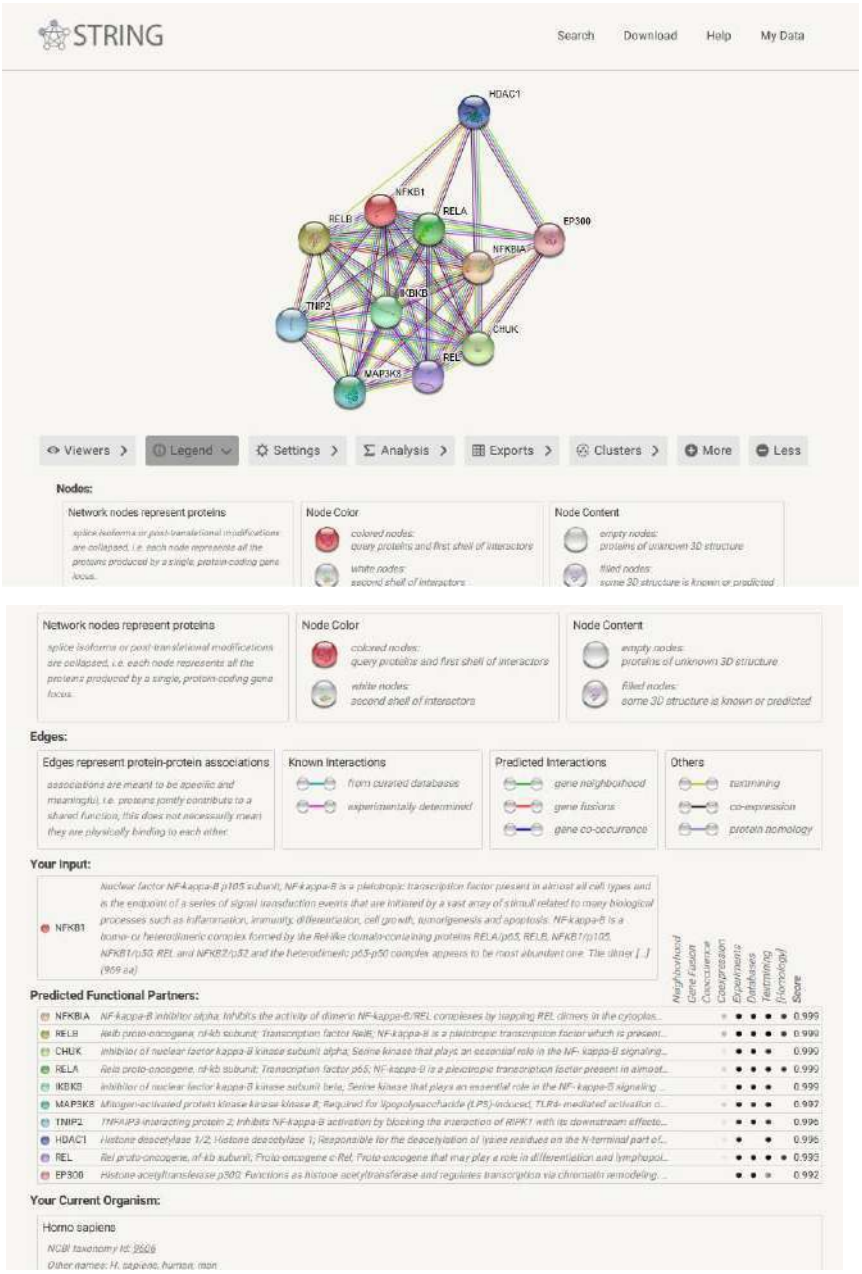




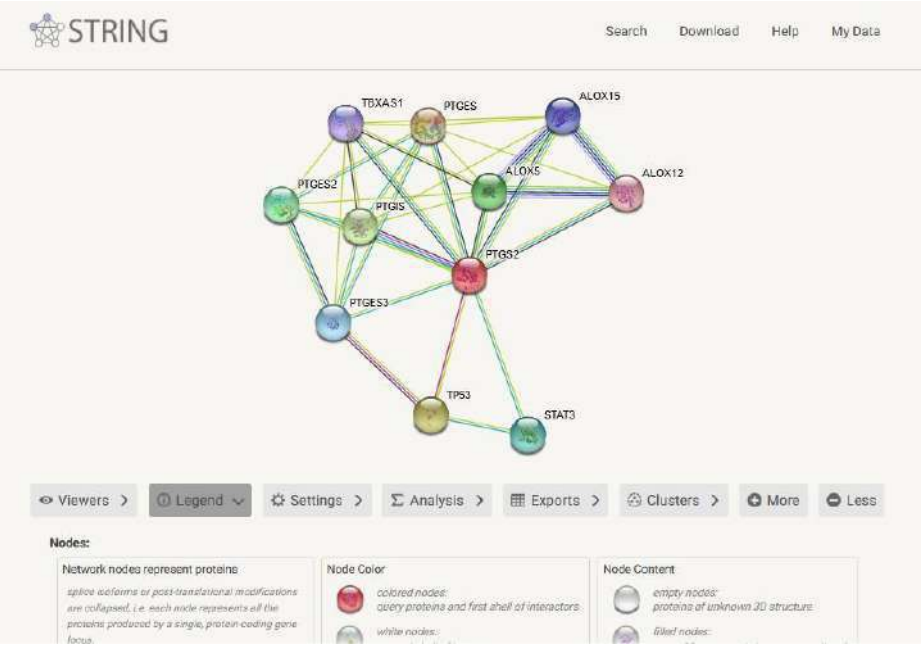
72 kDa type IV collagenase

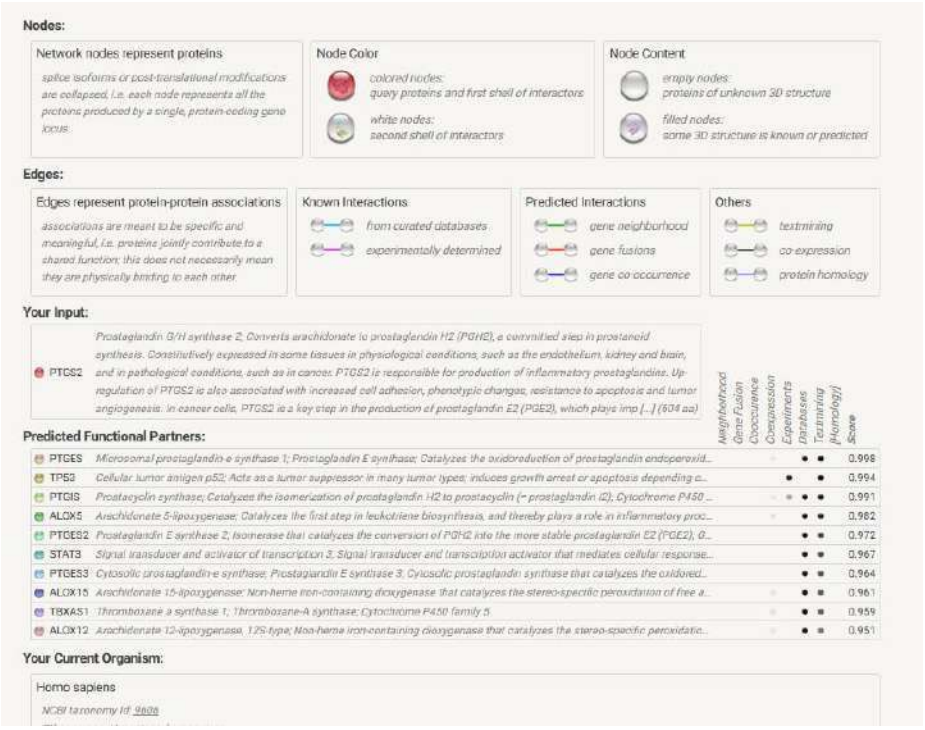


Matrix metalloproteinase-9

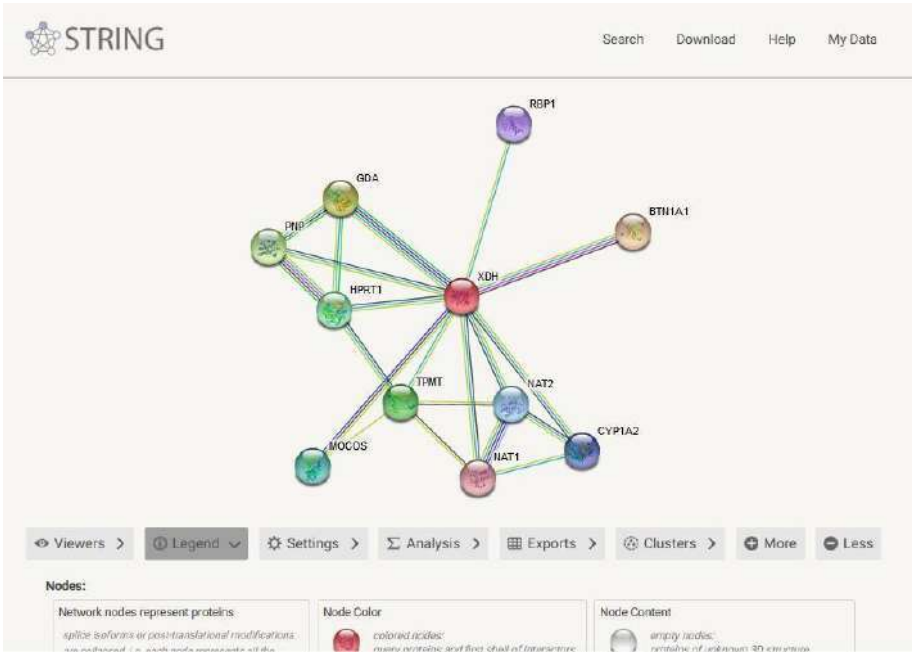


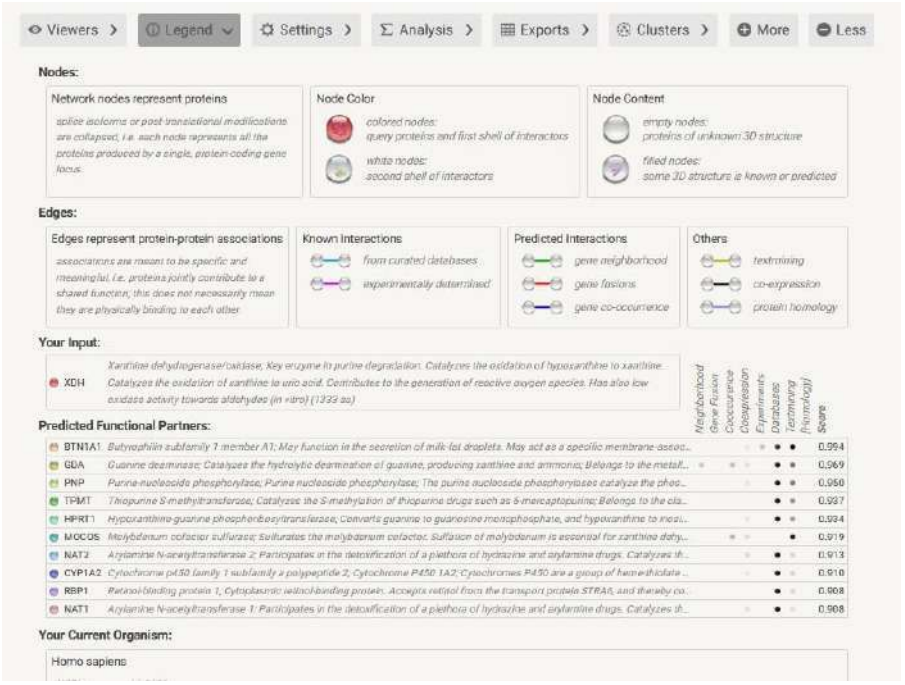
Nuclear factor NF-kappa-B p105 subunit





Prostaglandin G/H synthase 2





Xanthine dehydrogenase/oxidase

Lampiran 4 Data senyawa kandungan kimia dari KNApSAcK

input type = all , input word = phyllanthus niruri

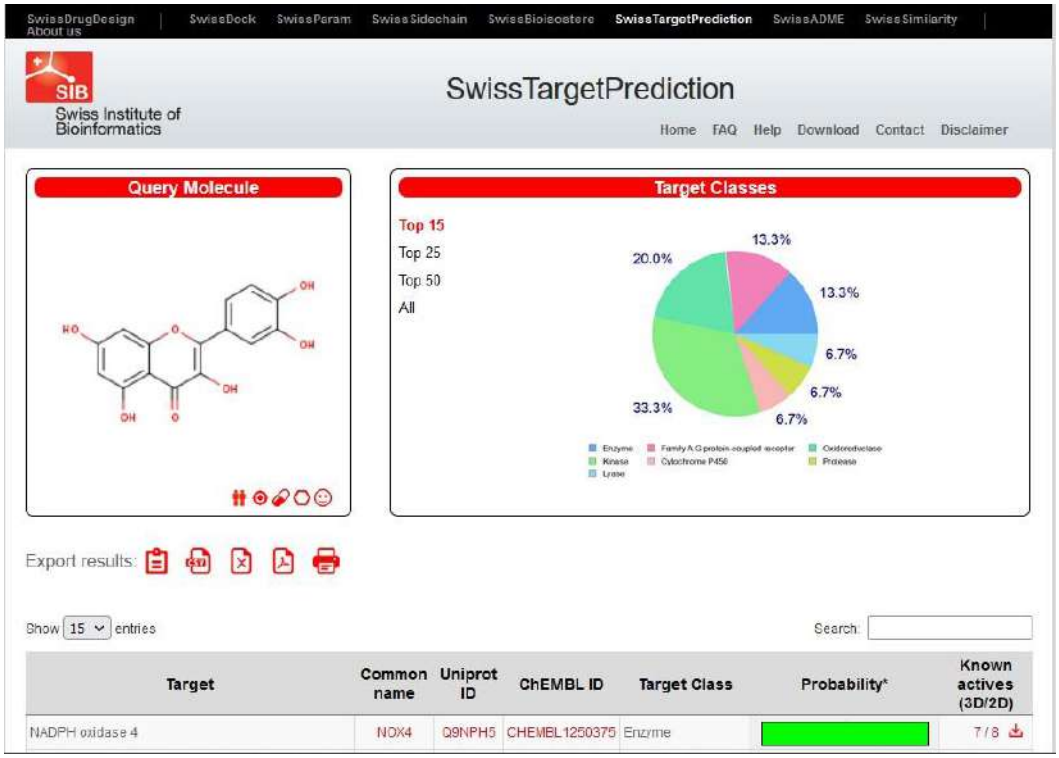
Number of matched data :19

C_ID	CAS ID	Metabolite	Molecular formula	Mw	Organism or InChIKey etc.
C00000706	10351-88-9	Phyllanthin	C24H34O6	418.23553882	Phyllanthus niruri
C00000707	33676-00-5	Hypophyllanthin	C24H30O7	430.19915831	Phyllanthus niruri
C00002608	26543-89-5	Hinokinin	C20H18O6	354.11033831	Phyllanthus niruri
C00002647	149-91-7	Gallic acid	C7H6O5	170.0215233	Phyllanthus niruri
C00002652	554-37-0	Glucogallin	C13H16O10	332.07434673	Phyllanthus niruri
C00003672	83-46-5	beta-Sitosterol	C29H50O	414.38616622	Phyllanthus niruri
C00004631	117-39-5	Quercetin	C15H10O7	302.04265268	Phyllanthus niruri
C00005139	480-10-4	Astragalin	C21H20O11	448.10056148	Phyllanthus niruri
C00005153	65063-32-3	Kaempferol 4'-rhamnoside	C21H20O10	432.10564686	Phyllanthus niruri
C00005302	95399-27-2	Fisetin 4'-glucoside	C21H20O11	448.10056148	Phyllanthus niruri
C00005373	482-35-9	Quercetin-3-O-glucoside	C21H20O12	464.09547611	Phyllanthus niruri
C00005374	522-12-3	Quercitrin	C21H20O11	448.10056148	Phyllanthus niruri
C00005413	153-18-4	Rutin	C27H30O16	610.15338491	Phyllanthus niruri
C00008271	96253-68-8	Nirurin	C32H40O15	664.23672061	Phyllanthus niruri
C00008292	480-35-3	Eriodictin	C21H22O10	434.12129692	Phyllanthus niruri
C00026161	91653-34-6	4-Methoxynorsecurinine	C13H15NO3	233.10519335	Phyllanthus niruri L
C00030823	50656-77-4	Niranthin	C24H32O7	432.21480338	Phyllanthus niruri
C00030824	50656-78-5	Nirtetralin	C24H30O7	430.19915831	Phyllanthus niruri
C00037423	73231-44-4	Lintetralin	C23H28O6	400.18858863	Phyllanthus niruri

Lampiran 5 Data Protein target senyawa kandungan kimia dari Uniprot

Senyawa	Kode gen target	Nama gen target
Quercetin	ABCG2	*ATP-binding cassette sub-family G member 2*
	HIF1A	*Hypoxia-inducible factor 1-alpha*
	IFNG	*Interferon gamma*
	MMP2	*72 kDa type IV collagenase*
	MMP9	*Matrix metalloproteinase-9*
	NFKB1	*Nuclear factor NF-kappa-B p105 subunit*
	PTGS2	*Prostaglandin G/H synthase 2*
	XDH	*Xanthine dehydrogenase/oxidase*
Isoquercetin	XDH	*Xanthine dehydrogenase/oxidase*

Lampiran 6 Prediksi protein target dari SwissTargetPrediction



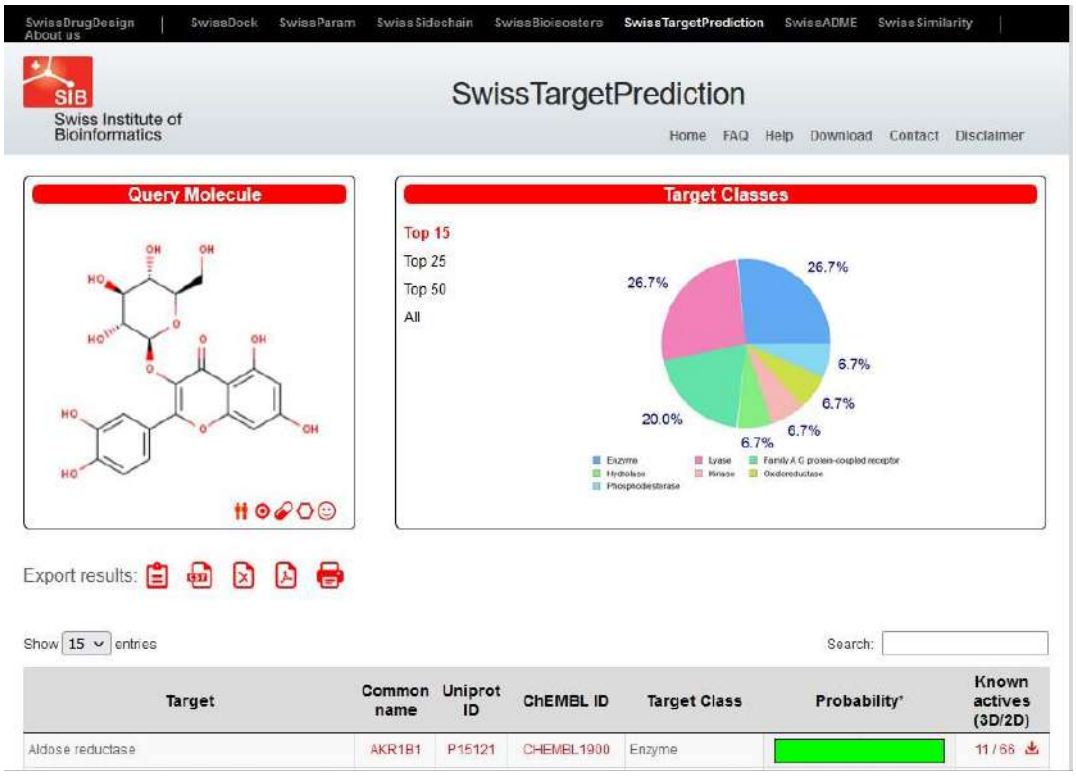
Show 15 entries Search:

Target	Common name	Uniprot ID	ChEMBL ID	Target Class	Probability*	Known actives (3D/2D)
NADPH oxidase 4	NOX4	Q9NPH5	CHEMBL1250375	Enzyme		7 / 8
Vasopressin V2 receptor	AVPR2	P30518	CHEMBL1790	Family A G protein-coupled receptor		1 / 1
Aldose reductase	AKR1B1	P15121	CHEMBL1900	Enzyme		18 / 72
Xanthine dehydrogenase	XDH	P47989	CHEMBL1929	Oxidoreductase		12 / 20
Monoamine oxidase A	MAOA	P21397	CHEMBL1951	Oxidoreductase		4 / 14
Insulin-like growth factor I receptor	IGF1R	P08069	CHEMBL1957	Kinase		3 / 3
Tyrosine-protein kinase receptor FLT3	FLT3	P36888	CHEMBL1974	Kinase		5 / 7
Cytochrome P450 19A1	CYP19A1	P11511	CHEMBL1978	Cytochrome P450		5 / 18
Epidermal growth factor receptor erbB1	EGFR	P00533	CHEMBL203	Kinase		5 / 28
Thrombin	F2	P00734	CHEMBL204	Protease		11 / 3
Carbonic anhydrase II	CA2	P00918	CHEMBL205	Lyase		7 / 15
Serine/threonine-protein kinase PIM1	PIM1	P11309	CHEMBL2147	Kinase		7 / 7
Arachidonate 5-lipoxygenase	ALOX5	P09917	CHEMBL215	Oxidoreductase		5 / 46
Serine/threonine-protein kinase Aurora-B	AURKB	Q96GD4	CHEMBL2185	Kinase		3 / 4
Dopamine D4 receptor	DRD4	P21917	CHEMBL219	Family A G protein-coupled receptor		1 / 1

Showing 1 to 15 of 100 entries Previous 1 2 3 4 5 6 7 Next

*Probability for the query molecule - assumed as bioactive - to have this protein as target.

Quercetin



Target	Common name	Uniprot ID	ChEMBL ID	Target Class	Probability*	Known actives (3D/2D)
Aldose reductase	AKR1B1	P15121	CHEMBL1900	Enzyme		11 / 66

Show 15 entries Search:

Target	Common name	Uniprot ID	ChEMBL ID	Target Class	Probability*	Known actives (3D/2D)
Aldose reductase	AKR1B1	P15121	CHEMBL1900	Enzyme		11 / 66
Carbonic anhydrase II	CA2	P00918	CHEMBL205	Lyase		4 / 10
Carbonic anhydrase VII	CA7	P43166	CHEMBL2326	Lyase		5 / 13
Carbonic anhydrase XII	CA12	O43570	CHEMBL3242	Lyase		5 / 20
Carbonic anhydrase IV	CA4	P22748	CHEMBL3729	Lyase		5 / 10
NADPH oxidase 4	NOX4	Q9NPH5	CHEMBL1250375	Enzyme		1 / 7
Adrenergic receptor alpha-2	ADRA2C	P18825	CHEMBL1916	Family A G protein-coupled receptor		2 / 2
Acetylcholinesterase	ACHE	P22303	CHEMBL220	Hydrolase		3 / 21
Quinone reductase 2	NQO2	P16083	CHEMBL3959	Enzyme		1 / 1
Ribosomal protein S6 kinase alpha 3	RPS6KA3	P51812	CHEMBL2345	Kinase		5 / 19
Neuromedin-U receptor 2	NMUR2	Q9GZQ4	CHEMBL1075144	Family A G protein-coupled receptor		1 / 1
Alpha-2a adrenergic receptor	ADRA2A	P08913	CHEMBL1867	Family A G protein-coupled receptor		1 / 1
Cyclooxygenase-2	PTGS2	P35354	CHEMBL230	Oxidoreductase		1 / 5
Lymphocyte differentiation antigen CD38	CD38	P28907	CHEMBL4660	Enzyme		0 / 2
Phosphodiesterase 5A	PDE5A	O76074	CHEMBL1827	Phosphodiesterase		0 / 6

Showing 1 to 15 of 100 entries Previous 1 2 3 4 5 6 7 Next

*Probability for the query molecule - assumed as bioactive - to have this protein as target.

Isoquercetin

Lampiran 7 Visualisasi menggunakan Cytoscape