


- Finally let's try BindingDB (<http://www.bindingdb.org/bind/index.jsp>)
- Search for “succinate dehydrogenase”. Then click on “succinate dehydrogenase [ubiquinone] iron-sulfur subunit, mitochondrial”.
- How many hits do you get?
- I see 57!



[myBDB logout](#)
[Search and Browse](#)
Target
 Sequence
 Name &
 Ki IC50 Kd EC50
 Rate constants
 ΔG° ΔH° $-\Delta S^\circ$
 pH (Enzymatic Assay)
 pH (ITC)
 Substrate or Competitor
 Compound Mol. Wt.
 Chemical Structure
 Pathways
 Source Organism
 Number of Compounds
 Monomer List in csv
 Hit List in SDF
Compound
 FDA Drugs
 Important Compounds
 Chemical Structure
 Name
 SMILES
 Number of Data / Targets
Special tools
 3D Structure Series
 Find My Compound's Targets
 Find Compounds for My Targets
 Do Virtual Screening
 SCOP

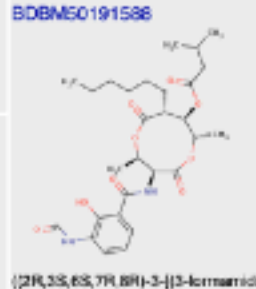
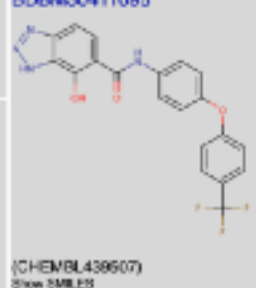
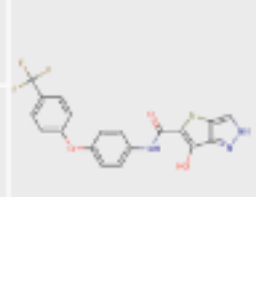
The Binding Database

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Compile Data Set for Download or QSAR

Found 57 hits

Sort by

Target/Host (institution)	Ligand	Target/Host Links	Ligand Links	Trg + Lig Links	Ki nM	ΔG° kcal/mole	IC50 nM	Kd nM	EC50/EC90 nM	k_{cat} s ⁻¹	k_{cat}/K_M M ⁻¹ s ⁻¹	pH	Temp °C
Succinate dehydrogenase [ubiquinone] iron-sulfur subunit, mitochondrial (Septoria tritici)	BOBM50191536  (2R,3S,6S,7R,8R)-3-[(3-tert-butyl-2-hydroxybenzoyl)-...] Show SMILES Show InChI	UniProtKB/SwissProt GoogleScholar	Purchase ChEMBL KEGG PC cid PC sid PDB UniChem Similar	Article PubMed	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a
Assay Description Inhibition of <i>Septoria nodorum</i> succinate dehydrogenase and Qi site of mitochondrial respiratory chain complex 3 by FME72-3 assay J Med Chem 49: 4762-6 (2006) Article DOI: 10.1021/jm060486u BindingDB Entry DOI: 10.22523/021082JC					More data for this Ligand-Target Pair								
Succinate dehydrogenase [ubiquinone] iron-sulfur subunit, mitochondrial (Septoria tritici)	BOBM50411095  (CHEMBL439607) Show SMILES Show InChI	UniProtKB/SwissProt GoogleScholar	ChEMBL PC cid PC sid UniChem Similar	Article PubMed	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a
Assay Description Inhibition of <i>Septoria nodorum</i> succinate dehydrogenase and Qi site of mitochondrial respiratory chain complex 3 by FME72-3 assay J Med Chem 49: 4762-6 (2006) Article DOI: 10.1021/jm060486u BindingDB Entry DOI: 10.22523/021082JC					More data for this Ligand-Target Pair								
Succinate dehydrogenase [ubiquinone] iron-sulfur subunit, mitochondrial (Septoria tritici)	BOBM50411096  (CHEMBL439607) Show SMILES Show InChI	UniProtKB/SwissProt GoogleScholar	ChEMBL PC cid PC sid UniChem Similar	Article PubMed	n/a	n/a	26	n/a	n/a	n/a	n/a	n/a	n/a
Assay Description Inhibition of <i>Septoria nodorum</i> succinate dehydrogenase and Qi site of mitochondrial respiratory chain complex 3 by FME72-3 assay J Med Chem 49: 4762-6 (2006)													

What do I learn from the BindingDB hits?

- The relatively large number of compounds that bind to SDH suggests that the site is druggable
- The results are from two studies, one that tested inhibition for a bacterium *Septoria tritici*, and another for humans. The fact that many compounds bind to the human enzyme means that specificity could be an issue.
- It may be worth trying some of the compounds against *P. Aeruginosa*.