**Supplemental Table 1**. List of all chemicals tested in the DIO1 inhibition assay, and their relative activity rank based upon inhibition activity at 200 µM.

| Chemical | CASRN | Source[a] | Rank[b] | % Inhibition[c] | | |
|---|---|---|---|---|---|---|
| | | | | median | minimum | maximum |
| Triclosan | 3380-34-5 | IS | 1 | 104.0 | 102.1 | 112.4 |
| Emamectin benzoate | 155569-91-8 | TCp1v2 | 2 | 100.4 | 100.2 | 103.2 |
| Zoxamide | 156052-68-5 | TCp1v2 | 3 | 93.1 | 92.5 | 97.3 |
| Oxytetracycline dihydrate | 6153-64-6 | TCp1v2 | 4 | 90.8 | 88.5 | 93.0 |
| Captafol | 2425-06-1 | TCp1v2 | 5 | 89.0 | 69.1 | 91.3 |
| Triflumizole | 68694-11-1 | TCp1v2 | 6 | 88.8 | 84.2 | 89.7 |
| Dicofol | 115-32-2 | TCp1v2 | 7 | 88.0 | 84.9 | 99.7 |
| Oryzalin | 19044-88-3 | IS | 8 | 85.2 | 80.5 | 96.9 |
| Oryzalin | 19044-88-3 | TCp1v2 | 9 | 81.9 | 73.7 | 84.4 |
| Fluazinam | 79622-59-6 | TCp1v2 | 10 | 76.3 | 74.4 | 86.2 |
| Fenthion | 55-38-9 | TCp1v2 | 11 | 74.3 | 73.8 | 79.2 |
| Cyazofamid | 120116-88-3 | TCp1v2 | 12 | 71.5 | 70.4 | 75.2 |
| Chlorophene | 120-32-1 | IS | 13 | 71.4 | 49.7 | 77.4 |
| 2-mercaptobenzothiazole | 149-30-4 | IS | 14 | 69.0 | 57.6 | 89.7 |
| Maneb | 12427-38-2 | TCp1v2 | 15 | 67.9 | 58.2 | 75.6 |
| Azinphos-methyl | 86-50-0 | TCp1v2 | 16 | 66.2 | 63.2 | 70.1 |
| Diclosulam | 145701-21-9 | TCp1v2 | 17 | 58.9 | 47.5 | 60.2 |
| Fipronil | 120068-37-3 | TCp1v2 | 18 | 57.8 | 55.7 | 60.6 |
| Butachlor | 23184-66-9 | TCp1v2 | 19 | 57.5 | 52.4 | 59.2 |
| Chlorothalonil | 1897-45-6 | TCp1v2 | 20 | 57.3 | 57.1 | 62.0 |
| Metolachlor | 51218-45-2 | TCp1v2 | 21 | 56.9 | 49.3 | 60.2 |
| Captan | 133-06-2 | TCp1v2 | 22 | 54.6 | 45.5 | 55.6 |
| Fenitrothion | 122-14-5 | TCp1v2 | 23 | 48.9 | 42.0 | 56.3 |
| Alachlor | 15972-60-8 | TCp1v2 | 24 | 48.6 | 45.7 | 57.5 |
| Acetochlor | 34256-82-1 | TCp1v2 | 25 | 48.3 | 46.8 | 52.0 |
| Pirimiphos-methyl | 29232-93-7 | TCp1v2 | 26 | 48.2 | 42.3 | 50.5 |
| Malathion | 121-75-5 | TCp1v2 | 27 | 47.8 | 37.9 | 53.6 |
| Flumiclorac-pentyl | 87546-18-7 | TCp1v2 | 28 | 46.5 | 44.0 | 51.8 |
| Niclosamide | 50-65-7 | TCp1v2 | 29 | 46.1 | 40.9 | 52.4 |
| Thidiazuron | 51707-55-2 | TCp1v2 | 30 | 45.1 | 38.6 | 46.0 |
| Mancozeb | 8018-01-7 | TCp1v2 | 31 | 45.1 | 37.4 | 68.0 |
| Chlorophene | 120-32-1 | TCp1v2 | 32 | 44.8 | 32.8 | 58.2 |
| Clodinafop-propargyl | 105512-06-9 | TCp1v2 | 33 | 44.7 | 43.9 | 49.5 |
| Quinoxyfen | 124495-18-7 | TCp1v2 | 34 | 43.4 | 38.8 | 45.4 |
| PFOS | 1763-23-1 | TCp1v2 | 35 | 42.7 | 13.4 | 45.3 |
| 5-Chloro-2-mercaptobenzothiazole | 5331-91-9 | IS | 36 | 42.2 | 41.9 | 62.5 |
| Prallethrin | 23031-36-9 | TCp1v2 | 37 | 38.7 | 31.5 | 55.4 |
| Mesotrione | 104206-82-8 | TCp1v2 | 38 | 38.4 | 34.9 | 40.1 |

| Chemical | CASRN | Source[a] | Rank[b] | % Inhibition[c] | | |
|---|---|---|---|---|---|---|
| | | | | median | minimum | maximum |
| 2,2-Bis(4-hydroxyphenyl)-1,1,1-trichloroethane | 2971-36-0 | TCp1v2 | 39 | 38.4 | 38.2 | 54.1 |
| Azamethiphos | 35575-96-3 | TCp1v2 | 40 | 37.7 | 36.0 | 40.6 |
| Acibenzolar-S-methyl | 135158-54-2 | TCp1v2 | 41 | 36.5 | 34.2 | 41.0 |
| Pirimicarb | 23103-98-2 | TCp1v2 | 42 | 33.9 | 31.8 | 51.3 |
| Rotenone | 83-79-4 | TCp1v2 | 43 | 33.1 | 29.7 | 34.5 |
| Methidathion | 950-37-8 | TCp1v2 | 44 | 32.3 | 22.1 | 63.8 |
| Folpet | 133-07-3 | TCp1v2 | 45 | 32.3 | 23.6 | 37.6 |
| Thiophanate-methyl | 23564-05-8 | TCp1v2 | 46 | 32.0 | 31.9 | 42.7 |
| Chlorpyrifos-methyl | 5598-13-0 | TCp1v2 | 47 | 30.6 | 15.4 | 31.7 |
| Propargite | 2312-35-8 | TCp1v2 | 48 | 29.2 | 26.0 | 30.6 |
| Milbemectin (mixture of 70% Milbemcin A4, 30% Milbemycin A3) | No CAS | TCp1v2 | 49 | 28.6 | 24.1 | 29.7 |
| Resmethrin | 10453-86-8 | TCp1v2 | 50 | 26.2 | 26.1 | 27.0 |
| Anilazine | 101-05-3 | TCp1v2 | 51 | 24.8 | 23.4 | 38.7 |
| Amitraz | 33089-61-1 | TCp1v2 | 52 | 24.4 | 16.5 | 27.2 |
| Methyl parathion | 298-00-0 | TCp1v2 | 53 | 20.8 | 10.9 | 45.2 |
| Tetramethrin | 7696-12-0 | TCp1v2 | 54 | 19.3 | 18.4 | 20.0 |
| Acifluorfen | 50594-66-6 | TCp1v2 | 55 | 17.0 | -0.2 | 18.0 |
| Chlorethoxyfos | 54593-83-8 | TCp1v2 | 56 | 16.7 | 8.7 | 21.3 |
| Isoxaflutole | 141112-29-0 | TCp1v2 | 57 | 14.6 | -6.4 | 15.4 |
| Forchlorfenuron | 68157-60-8 | TCp1v2 | 58 | 14.5 | 10.4 | 19.1 |
| Bromoxynil | 1689-84-5 | TCp1v2 | 59 | 14.5 | 12.5 | 27.5 |
| Dimethenamid | 87674-68-8 | TCp1v2 | 60 | 12.7 | 12.0 | 12.8 |
| Diazinon | 333-41-5 | TCp1v2 | 61 | 12.1 | 0.9 | 38.2 |
| Clopyralid | 1702-17-6 | TCp1v2 | 62 | 11.4 | -9.2 | 12.5 |
| Symclosene | 87-90-1 | TCp1v2 | 63 | 10.7 | 7.1 | 10.8 |
| Spiroxamine | 118134-30-8 | TCp1v2 | 64 | 10.6 | 6.6 | 11.8 |
| Prodiamine | 29091-21-2 | TCp1v2 | 65 | 10.6 | -5.2 | 11.0 |
| Chlorpyrifos oxon | 5598-15-2 | TCp1v2 | 66 | 9.8 | 8.4 | 16.7 |
| Imazamox | 114311-32-9 | TCp1v2 | 67 | 9.3 | -1.9 | 12.3 |
| Flumioxazin | 103361-09-7 | TCp1v2 | 68 | 9.2 | 4.0 | 27.8 |
| Fluoxastrobin | 361377-29-9 | TCp1v2 | 69 | 9.0 | -6.2 | 12.7 |
| Etoxazole | 153233-91-1 | TCp1v2 | 70 | 8.9 | 2.3 | 13.9 |
| Fenamiphos | 22224-92-6 | TCp1v2 | 71 | 8.5 | 1.9 | 11.4 |
| Endosulfan | 115-29-7 | TCp1v2 | 72 | 8.1 | 1.7 | 13.4 |
| Oxamyl | 23135-22-0 | TCp1v2 | 73 | 8.1 | -16.9 | 8.8 |
| Tepraloxydim | 149979-41-9 | TCp1v2 | 74 | 7.6 | -8.9 | 12.1 |
| Thiacloprid | 111988-49-9 | TCp1v2 | 75 | 7.2 | -10.0 | 7.4 |
| Trifloxystrobin | 141517-21-7 | TCp1v2 | 76 | 7.1 | -5.9 | 7.8 |
| Iodosulfuron-methyl-sodium | 144550-36-7 | TCp1v2 | 77 | 6.7 | -7.9 | 10.5 |
| Cyclanilide | 113136-77-9 | TCp1v2 | 78 | 6.7 | -1.2 | 12.3 |

| Chemical | CASRN | Source[a] | Rank[b] | % Inhibition[c] | | |
|---|---|---|---|---|---|---|
| | | | | median | minimum | maximum |
| Ethephon | 16672-87-0 | TCp1v2 | 79 | 6.7 | 1.8 | 7.4 |
| 2,4-DB | 94-82-6 | TCp1v2 | 80 | 6.5 | -10.9 | 12.4 |
| Imazapic | 104098-48-8 | TCp1v2 | 81 | 6.4 | -15.9 | 11.4 |
| Tebufenozide | 112410-23-8 | TCp1v2 | 82 | 6.3 | -3.6 | 7.3 |
| Isazofos | 42509-80-8 | TCp1v2 | 83 | 6.3 | 0.4 | 8.8 |
| Mevinphos | 7786-34-7 | TCp1v2 | 84 | 6.3 | 2.7 | 10.5 |
| Oxyfluorfen | 42874-03-3 | TCp1v2 | 85 | 6.2 | 2.5 | 6.3 |
| Dimethomorph | 110488-70-5 | TCp1v2 | 86 | 6.2 | -18.5 | 10.7 |
| Novaluron | 116714-46-6 | TCp1v2 | 87 | 6.0 | -13.6 | 8.5 |
| Atrazine | 1912-24-9 | TCp1v2 | 88 | 5.8 | -6.1 | 8.6 |
| Penoxsulam | 219714-96-2 | TCp1v2 | 89 | 5.8 | -1.8 | 9.2 |
| Ethofumesate | 26225-79-6 | TCp1v2 | 90 | 5.7 | 5.3 | 11.8 |
| S-Bioallethrin | 28434-00-6 | TCp1v2 | 91 | 5.7 | 3.1 | 6.4 |
| Deisopropylatrazine | 1007-28-9 | TCp1v2 | 92 | 5.7 | -8.5 | 8.7 |
| Fluroxypyr-meptyl | 81406-37-3 | TCp1v2 | 93 | 5.7 | -8.4 | 7.7 |
| Icaridin | 119515-38-7 | TCp1v2 | 94 | 5.7 | -9.7 | 8.8 |
| Malaoxon | 1634-78-2 | TCp1v2 | 95 | 5.6 | 1.5 | 19.2 |
| Flufenacet | 142459-58-3 | TCp1v2 | 96 | 5.4 | 0.6 | 6.2 |
| Pyrithiobac-sodium | 123343-16-8 | TCp1v2 | 97 | 5.3 | -4.5 | 6.7 |
| Famoxadone | 131807-57-3 | TCp1v2 | 98 | 5.2 | 0.1 | 5.9 |
| Fluroxypyr | 69377-81-7 | TCp1v2 | 99 | 5.1 | 0.8 | 5.4 |
| Fluazifop-butyl | 69806-50-4 | TCp1v2 | 100 | 5.0 | 2.5 | 7.0 |
| Propetamphos | 31218-83-4 | TCp1v2 | 101 | 4.7 | 3.7 | 5.6 |
| Fenamidone | 161326-34-7 | TCp1v2 | 102 | 4.7 | -4.0 | 6.1 |
| Tetraconazole | 112281-77-3 | TCp1v2 | 103 | 4.5 | -9.0 | 7.6 |
| Dichlorprop | 120-36-5 | TCp1v2 | 104 | 4.5 | -1.9 | 14.3 |
| 2-(Thiocyanomethylthio)-benzothiazole | 21564-17-0 | TCp1v2 | 105 | 4.4 | 0.5 | 7.7 |
| Cypermethrin | 52315-07-8 | TCp1v2 | 106 | 4.3 | -1.8 | 6.4 |
| Propazine | 139-40-2 | TCp1v2 | 107 | 4.2 | -4.2 | 4.5 |
| Cyanamide | 420-04-2 | TCp1v2 | 108 | 4.1 | -1.0 | 4.1 |
| Ethylene thiourea | 96-45-7 | TCp1v2 | 109 | 4.0 | -2.3 | 4.0 |
| Hexaconazole | 79983-71-4 | TCp1v2 | 110 | 3.8 | 2.5 | 7.8 |
| Pyraclostrobin | 175013-18-0 | TCp1v2 | 111 | 3.8 | -2.3 | 12.7 |
| Tebupirimfos | 96182-53-5 | TCp1v2 | 112 | 3.7 | -2.6 | 20.0 |
| Abamectin | 71751-41-2 | TCp1v2 | 113 | 3.6 | -1.8 | 6.7 |
| Napropamide | 15299-99-7 | TCp1v2 | 114 | 3.5 | 2.6 | 4.9 |
| Cycloate | 1134-23-2 | TCp1v2 | 115 | 3.5 | 1.9 | 4.6 |
| Naled | 300-76-5 | TCp1v2 | 116 | 3.5 | -4.0 | 4.3 |
| Dicloran | 99-30-9 | TCp1v2 | 117 | 3.5 | -0.9 | 6.4 |
| Flufenpyr-ethyl | 188489-07-8 | TCp1v2 | 118 | 3.5 | 3.4 | 6.2 |
| Chloridazon | 1698-60-8 | TCp1v2 | 119 | 3.4 | -5.3 | 7.2 |

| Chemical | CASRN | Source[a] | Rank[b] | % Inhibition[c] | | |
|---|---|---|---|---|---|---|
| | | | | median | minimum | maximum |
| Carboxin | 5234-68-4 | TCp1v2 | 120 | 3.3 | -3.9 | 9.4 |
| Fenoxaprop-ethyl | 66441-23-4 | TCp1v2 | 121 | 3.2 | 1.9 | 3.3 |
| Bensulide | 741-58-2 | TCp1v2 | 122 | 3.0 | 0.9 | 3.7 |
| Thiodicarb | 59669-26-0 | TCp1v2 | 123 | 3.0 | -2.0 | 16.2 |
| Thiram | 137-26-8 | TCp1v2 | 124 | 3.0 | 2.4 | 3.2 |
| Bendiocarb | 22781-23-3 | TCp1v2 | 125 | 2.9 | -1.4 | 5.9 |
| Lindane | 58-89-9 | TCp1v2 | 126 | 2.8 | 0.2 | 3.2 |
| Prochloraz | 67747-09-5 | TCp1v2 | 127 | 2.8 | 0.1 | 4.1 |
| Buprofezin | 69327-76-0 | TCp1v2 | 128 | 2.7 | -1.1 | 2.7 |
| Lactofen | 77501-63-4 | TCp1v2 | 129 | 2.7 | -0.7 | 3.3 |
| Dicamba | 1918-00-9 | TCp1v2 | 130 | 2.5 | -1.8 | 5.2 |
| Terbacil | 5902-51-2 | TCp1v2 | 131 | 2.5 | -3.1 | 4.9 |
| Triadimefon | 43121-43-3 | TCp1v2 | 132 | 2.4 | 0.4 | 5.4 |
| Quizalofop-ethyl | 76578-14-8 | TCp1v2 | 133 | 2.4 | -0.5 | 12.7 |
| Phosalone | 2310-17-0 | TCp1v2 | 134 | 2.4 | 2.4 | 8.3 |
| 2-(Methylthio)benzothiazole | 615-22-5 | IS | 135 | 2.3 | -5.3 | 3.0 |
| Imidacloprid | 138261-41-3 | TCp1v2 | 136 | 2.3 | 2.1 | 6.4 |
| Butylate | 2008-41-5 | TCp1v2 | 137 | 2.2 | -1.6 | 5.3 |
| Methoxyfenozide | 161050-58-4 | TCp1v2 | 138 | 2.2 | -7.0 | 3.0 |
| Benzothiazole | 95-16-9 | IS | 139 | 2.2 | -3.9 | 5.1 |
| Cyhalofop-butyl | 122008-85-9 | TCp1v2 | 140 | 2.1 | -2.0 | 2.4 |
| Cyromazine | 66215-27-8 | TCp1v2 | 141 | 2.1 | -2.4 | 4.3 |
| Acephate | 30560-19-1 | TCp1v2 | 142 | 1.9 | -1.5 | 3.3 |
| Imazapyr | 81334-34-1 | TCp1v2 | 143 | 1.8 | -4.9 | 7.7 |
| Imazaquin | 81335-37-7 | TCp1v2 | 144 | 1.8 | 1.3 | 5.9 |
| Paclobutrazol | 76738-62-0 | TCp1v2 | 145 | 1.8 | 0.4 | 21.0 |
| Bentazone | 25057-89-0 | TCp1v2 | 146 | 1.7 | 0.5 | 11.4 |
| Boscalid | 188425-85-6 | TCp1v2 | 147 | 1.7 | -0.9 | 3.7 |
| Butafenacil | 134605-64-4 | TCp1v2 | 148 | 1.7 | 1.6 | 5.4 |
| Sethoxydim | 74051-80-2 | TCp1v2 | 149 | 1.5 | -2.4 | 4.0 |
| Cloprop | 101-10-0 | TCp1v2 | 150 | 1.4 | 0.7 | 3.7 |
| Esfenvalerate | 66230-04-4 | TCp1v2 | 151 | 1.4 | -5.8 | 4.7 |
| Asulam | 3337-71-1 | TCp1v2 | 152 | 1.4 | 0.8 | 6.0 |
| Ethalfluralin | 55283-68-6 | TCp1v2 | 153 | 1.3 | -2.9 | 6.8 |
| Clopyralid-olamine | 57754-85-5 | TCp1v2 | 154 | 1.3 | -0.8 | 4.0 |
| Dazomet | 533-74-4 | TCp1v2 | 155 | 1.3 | -1.5 | 1.9 |
| Fenarimol | 60168-88-9 | TCp1v2 | 156 | 1.3 | 1.2 | 3.7 |
| Flutolanil | 66332-96-5 | TCp1v2 | 157 | 1.3 | -5.4 | 3.9 |
| Fluometuron | 2164-17-2 | TCp1v2 | 158 | 1.2 | -4.7 | 2.0 |
| Cyanazine | 21725-46-2 | TCp1v2 | 159 | 1.2 | -6.3 | 13.2 |
| Maleic hydrazide | 123-33-1 | TCp1v2 | 160 | 1.2 | -1.5 | 1.7 |
| Clomazone | 81777-89-1 | TCp1v2 | 161 | 1.2 | -5.4 | 4.5 |

| Chemical | CASRN | Source[a] | Rank[b] | % Inhibition[c] | | |
|---|---|---|---|---|---|---|
| | | | | median | minimum | maximum |
| Trichlorfon | 52-68-6 | TCp1v2 | 162 | 1.1 | -2.1 | 1.4 |
| Dimethoate | 60-51-5 | TCp1v2 | 163 | 1.0 | 0.8 | 29.8 |
| Chloroneb | 2675-77-6 | TCp1v2 | 164 | 0.9 | 0.5 | 2.1 |
| Pymetrozine | 123312-89-0 | TCp1v2 | 165 | 0.9 | -1.5 | 6.4 |
| Prometon | 1610-18-0 | TCp1v2 | 166 | 0.9 | -5.1 | 1.4 |
| Clothianidin | 210880-92-5 | TCp1v2 | 167 | 0.8 | -1.5 | 2.3 |
| Dibutyl phthalate | 84-74-2 | TCp1v2 | 168 | 0.8 | -16.7 | 13.8 |
| Formetanate hydrochloride | 23422-53-9 | TCp1v2 | 169 | 0.8 | -4.3 | 1.6 |
| Isoxaben | 82558-50-7 | TCp1v2 | 170 | 0.8 | -3.1 | 4.3 |
| Cinmethylin | 87818-31-3 | TCp1v2 | 171 | 0.8 | 0.6 | 1.1 |
| Ametryn | 834-12-8 | TCp1v2 | 172 | 0.7 | -3.0 | 1.3 |
| Dicrotophos | 141-66-2 | TCp1v2 | 173 | 0.7 | -1.5 | 4.3 |
| Imazalil | 35554-44-0 | TCp1v2 | 174 | 0.6 | -8.4 | 3.7 |
| Tri-allate | 2303-17-5 | TCp1v2 | 175 | 0.6 | 0.3 | 2.9 |
| Fludioxonil | 131341-86-1 | TCp1v2 | 176 | 0.5 | -2.2 | 3.2 |
| Propanil | 709-98-8 | TCp1v2 | 177 | 0.5 | -0.5 | 3.2 |
| Monocrotophos | 6923-22-4 | TCp1v2 | 178 | 0.5 | -5.0 | 3.4 |
| Carfentrazone-ethyl | 128639-02-1 | TCp1v2 | 179 | 0.4 | -5.3 | 17.3 |
| Fenoxycarb | 72490-01-8 | TCp1v2 | 180 | 0.4 | -0.7 | 3.7 |
| PFOA | 335-67-1 | TCp1v2 | 181 | 0.4 | -5.2 | 0.8 |
| 2-Methoxyethanol | 109-86-4 | TCp1v2 | 182 | 0.4 | -1.8 | 2.5 |
| MGK-264 | 113-48-4 | TCp1v2 | 183 | 0.3 | -10.7 | 13.4 |
| Diphenylamine | 122-39-4 | TCp1v2 | 184 | 0.3 | -2.5 | 2.3 |
| Methamidophos | 10265-92-6 | TCp1v2 | 185 | 0.1 | -2.1 | 5.7 |
| Bifenthrin | 82657-04-3 | TCp1v2 | 186 | 0.1 | -4.5 | 0.6 |
| Tebuthiuron | 34014-18-1 | TCp1v2 | 187 | 0.1 | -4.0 | 1.0 |
| Diquat dibromide monohydrate | 6385-62-2 | TCp1v2 | 188 | 0.1 | -0.8 | 1.0 |
| Cymoxanil | 57966-95-7 | TCp1v2 | 189 | 0.0 | -0.1 | 0.4 |
| Iprodione | 36734-19-7 | TCp1v2 | 190 | -0.1 | -4.4 | 2.7 |
| Myclobutanil | 88671-89-0 | TCp1v2 | 191 | -0.1 | -1.2 | 2.5 |
| Benomyl | 17804-35-2 | TCp1v2 | 192 | -0.1 | -1.6 | 1.4 |
| Bromacil | 314-40-9 | TCp1v2 | 193 | -0.2 | -5.2 | 0.2 |
| Thiabendazole | 148-79-8 | TCp1v2 | 194 | -0.2 | -0.3 | 3.7 |
| Simazine | 122-34-9 | TCp1v2 | 195 | -0.2 | -1.2 | 1.6 |
| Difenzoquat metilsulfate | 43222-48-6 | TCp1v2 | 196 | -0.2 | -1.5 | 4.9 |
| Dithiopyr | 97886-45-8 | TCp1v2 | 197 | -0.2 | -1.6 | 11.8 |
| Diniconazole | 83657-24-3 | TCp1v2 | 198 | -0.3 | -2.7 | 1.9 |
| Butralin | 33629-47-9 | TCp1v2 | 199 | -0.3 | -5.8 | 2.2 |
| Vinclozolin | 50471-44-8 | TCp1v2 | 200 | -0.3 | -3.3 | 0.5 |
| Carbaryl | 63-25-2 | TCp1v2 | 201 | -0.4 | -4.2 | 3.3 |
| Quinclorac | 84087-01-4 | TCp1v2 | 202 | -0.5 | -2.8 | 5.1 |

| Chemical | CASRN | Source[a] | Rank[b] | % Inhibition[c] | | |
|---|---|---|---|---|---|---|
| | | | | median | minimum | maximum |
| Prometryn | 7287-19-6 | TCp1v2 | 203 | -0.5 | -2.9 | 10.5 |
| Hexythiazox | 78587-05-0 | TCp1v2 | 204 | -0.5 | -2.9 | 3.1 |
| Benfluralin | 1861-40-1 | TCp1v2 | 205 | -0.5 | -1.0 | 1.4 |
| Bisphenol A | 80-05-7 | TCp1v2 | 206 | -0.5 | -6.6 | 8.7 |
| Trifloxysulfuron-sodium | 199119-58-9 | TCp1v2 | 207 | -0.6 | -5.8 | 8.0 |
| Thiazopyr | 117718-60-2 | TCp1v2 | 208 | -0.6 | -2.9 | 5.0 |
| Pentachloronitrobenzene | 82-68-8 | TCp1v2 | 209 | -0.7 | -2.4 | 3.0 |
| 2,4-Dichlorophenoxyacetic acid | 94-75-7 | TCp1v2 | 210 | -0.7 | -11.0 | 2.4 |
| Parathion | 56-38-2 | TCp1v2 | 211 | -0.7 | -2.4 | 4.0 |
| Metribuzin | 21087-64-9 | TCp1v2 | 212 | -0.7 | -5.5 | 0.0 |
| Triadimenol | 55219-65-3 | TCp1v2 | 213 | -0.7 | -4.3 | 7.2 |
| Aldicarb | 116-06-3 | TCp1v2 | 214 | -0.8 | -12.8 | 3.0 |
| DEET | 134-62-3 | TCp1v2 | 215 | -0.8 | -1.8 | 4.3 |
| Propyzamide | 23950-58-5 | TCp1v2 | 216 | -0.8 | -6.8 | 1.4 |
| Disulfoton | 298-04-4 | TCp1v2 | 217 | -0.9 | -7.7 | -0.2 |
| Coumaphos | 56-72-4 | TCp1v2 | 218 | -0.9 | -1.5 | 16.6 |
| Triticonazole | 131983-72-7 | TCp1v2 | 219 | -1.0 | -2.9 | 6.7 |
| Triphenyltin hydroxide | 76-87-9 | TCp1v2 | 220 | -1.0 | -4.5 | 0.7 |
| Methyl isothiocyanate | 556-61-6 | TCp1v2 | 221 | -1.0 | -5.2 | 5.1 |
| Tribufos | 78-48-8 | TCp1v2 | 222 | -1.0 | -2.3 | 1.5 |
| Cyfluthrin | 68359-37-5 | TCp1v2 | 223 | -1.0 | -8.1 | 5.1 |
| Dimethyl phthalate | 131-11-3 | TCp1v2 | 224 | -1.0 | -2.9 | 4.2 |
| Picloram | 1918-02-1 | TCp1v2 | 225 | -1.0 | -2.9 | 1.9 |
| Tebufenpyrad | 119168-77-3 | TCp1v2 | 226 | -1.0 | -2.0 | 5.1 |
| Flusilazole | 85509-19-9 | TCp1v2 | 227 | -1.1 | -2.3 | 2.5 |
| Di(2-ethylhexyl) phthalate | 117-81-7 | TCp1v2 | 228 | -1.2 | -1.9 | 0.3 |
| Imazethapyr | 81335-77-5 | TCp1v2 | 229 | -1.3 | -5.2 | 3.3 |
| Acetamiprid | 135410-20-7 | TCp1v2 | 230 | -1.4 | -3.4 | 6.7 |
| Diclofop-methyl | 51338-27-3 | TCp1v2 | 231 | -1.5 | -2.8 | 12.2 |
| Flumetsulam | 98967-40-9 | TCp1v2 | 232 | -1.5 | -3.4 | 14.4 |
| Dichlobenil | 1194-65-6 | TCp1v2 | 233 | -1.6 | -3.9 | 2.7 |
| 2-Phenoxyethanol | 122-99-6 | TCp1v2 | 234 | -1.6 | -2.3 | 1.9 |
| Permethrin | 52645-53-1 | TCp1v2 | 235 | -1.6 | -2.1 | 18.9 |
| Linuron | 330-55-2 | TCp1v2 | 236 | -1.6 | -4.3 | 6.9 |
| Spirodiclofen | 148477-71-8 | TCp1v2 | 237 | -1.7 | -2.1 | 9.6 |
| Norflurazon | 27314-13-2 | TCp1v2 | 238 | -1.8 | -2.7 | 5.8 |
| Pendimethalin | 40487-42-1 | TCp1v2 | 239 | -1.8 | -2.7 | 0.7 |
| Thiobencarb | 28249-77-6 | TCp1v2 | 240 | -1.8 | -3.1 | 0.1 |
| Indoxacarb | 173584-44-6 | TCp1v2 | 241 | -1.8 | -2.8 | 2.9 |
| Molinate | 2212-67-1 | TCp1v2 | 242 | -1.9 | -3.9 | 7.9 |
| Tralkoxydim | 87820-88-0 | TCp1v2 | 243 | -1.9 | -8.4 | 5.0 |

| Chemical | CASRN | Source[a] | Rank[b] | % Inhibition[c] | | |
|---|---|---|---|---|---|---|
| | | | | median | minimum | maximum |
| Dimethylarsinic acid | 75-60-5 | TCp1v2 | 244 | -1.9 | -8.0 | 3.0 |
| Diuron | 330-54-1 | TCp1v2 | 245 | -1.9 | -4.2 | 1.1 |
| Methomyl | 16752-77-5 | TCp1v2 | 246 | -1.9 | -7.1 | -1.0 |
| Cyprodinil | 121552-61-2 | TCp1v2 | 247 | -1.9 | -2.0 | -1.5 |
| Piperonyl butoxide | 51-03-6 | TCp1v2 | 248 | -2.0 | -5.0 | 6.4 |
| Propoxur | 114-26-1 | TCp1v2 | 249 | -2.0 | -2.3 | 2.0 |
| MEHP | 4376-20-9 | TCp1v2 | 250 | -2.1 | -2.8 | 2.4 |
| Azoxystrobin | 131860-33-8 | TCp1v2 | 251 | -2.1 | -15.4 | 10.2 |
| Difenoconazole | 119446-68-3 | TCp1v2 | 252 | -2.3 | -4.3 | 1.6 |
| MCPA | 94-74-6 | TCp1v2 | 253 | -2.4 | -6.6 | 0.4 |
| Trifluralin | 1582-09-8 | TCp1v2 | 254 | -2.5 | -2.9 | 0.5 |
| Fluthiacet-methyl | 117337-19-6 | TCp1v2 | 255 | -2.5 | -5.6 | 11.4 |
| Clofentezine | 74115-24-5 | TCp1v2 | 256 | -2.5 | -3.8 | 0.9 |
| Methoxychlor | 72-43-5 | TCp1v2 | 257 | -2.6 | -4.5 | 6.6 |
| Propiconazole | 60207-90-1 | TCp1v2 | 258 | -2.7 | -6.1 | 3.1 |
| Mepiquat chloride | 24307-26-4 | TCp1v2 | 259 | -2.7 | -3.1 | 5.7 |
| Fenpropathrin | 39515-41-8 | TCp1v2 | 260 | -2.8 | -3.9 | 1.6 |
| Pyriproxyfen | 95737-68-1 | TCp1v2 | 261 | -2.8 | -4.9 | 7.3 |
| 2-Aminobenzothiazole | 136-95-8 | IS | 262 | -3.0 | -4.9 | 5.4 |
| Chlorpropham | 101-21-3 | TCp1v2 | 263 | -3.0 | -3.3 | 6.3 |
| Profenofos | 41198-08-7 | TCp1v2 | 264 | -3.1 | -3.7 | 3.2 |
| Iopanoic acid | 96-83-3 | IS | 265 | -3.2 | -3.7 | 6.7 |
| Boric acid | 10043-35-3 | TCp1v2 | 266 | -3.2 | -6.3 | 4.6 |
| Metalaxyl | 57837-19-1 | TCp1v2 | 267 | -3.2 | -6.8 | 4.0 |
| Monobutyl phthalate | 131-70-4 | TCp1v2 | 268 | -3.6 | -7.4 | 1.7 |
| EPTC | 759-94-4 | TCp1v2 | 269 | -3.7 | -4.0 | 2.8 |
| Sulfentrazone | 122836-35-5 | TCp1v2 | 270 | -3.9 | -4.8 | 13.6 |
| Nitrapyrin | 1929-82-4 | TCp1v2 | 271 | -4.0 | -4.0 | 3.0 |
| 2-Hydroxybenzothiazole | 934-34-9 | IS | 272 | -4.0 | -13.1 | 2.9 |
| Diazoxon | 962-58-3 | TCp1v2 | 273 | -4.2 | -7.4 | 3.1 |
| Metam-sodium hydrate | 6734-80-1 | TCp1v2 | 274 | -4.2 | -4.8 | 2.7 |
| Dichlorvos | 62-73-7 | TCp1v2 | 275 | -4.3 | -5.0 | 3.5 |
| Allethrin | 584-79-2 | TCp1v2 | 276 | -4.6 | -6.2 | 10.6 |
| Monomethyl phthalate | 4376-18-5 | TCp1v2 | 277 | -4.8 | -7.5 | 1.2 |
| Pyraflufen-ethyl | 129630-19-9 | TCp1v2 | 278 | -4.8 | -34.2 | 4.7 |
| Cyproconazole | 94361-06-5 | TCp1v2 | 279 | -4.9 | -6.7 | 18.1 |
| Fluazifop-P-butyl | 79241-46-6 | TCp1v2 | 280 | -5.1 | -10.6 | 4.7 |
| Ethoprop | 13194-48-4 | TCp1v2 | 281 | -5.3 | -8.9 | 5.1 |
| Daminozide | 1596-84-5 | TCp1v2 | 282 | -5.4 | -6.0 | -4.7 |
| Hexazinone | 51235-04-2 | TCp1v2 | 283 | -5.4 | -8.8 | 3.0 |
| Oxadiazon | 19666-30-9 | TCp1v2 | 284 | -5.4 | -6.3 | 3.6 |
| Etridiazole | 2593-15-9 | TCp1v2 | 285 | -5.4 | -5.8 | 15.0 |

| Chemical | CASRN | Source[a] | Rank[b] | % Inhibition[c] | | |
|---|---|---|---|---|---|---|
| | | | | median | minimum | maximum |
| Tefluthrin | 79538-32-2 | TCp1v2 | 286 | -5.8 | -13.2 | 10.8 |
| 2-Phenylphenol | 90-43-7 | TCp1v2 | 287 | -6.8 | -8.5 | 3.0 |
| Fenbuconazole | 114369-43-6 | TCp1v2 | 288 | -6.8 | -9.4 | -4.1 |
| Fenpyroximate (Z,E) | 111812-58-9 | TCp1v2 | 289 | -6.9 | -11.3 | 11.6 |
| Fosthiazate | 98886-44-3 | TCp1v2 | 290 | -8.1 | -16.8 | 11.1 |
| Propoxycarbazone-sodium | 181274-15-7 | TCp1v2 | 291 | -8.3 | -10.2 | 8.0 |
| Thiamethoxam | 153719-23-4 | TCp1v2 | 292 | -8.4 | -10.0 | 4.2 |
| Propamocarb hydrochloride | 25606-41-1 | TCp1v2 | 293 | -8.5 | -14.2 | 6.5 |
| Dipropyl 2,5-pyridinedicarboxylate | 136-45-8 | TCp1v2 | 294 | -8.6 | -15.8 | 11.7 |
| Flumetralin | 62924-70-3 | TCp1v2 | 295 | -8.6 | -10.7 | 11.1 |
| Pyridaben | 96489-71-3 | TCp1v2 | 296 | -9.1 | -12.3 | 9.3 |
| Bifenazate | 149877-41-8 | TCp1v2 | 297 | -9.6 | -13.2 | 13.6 |
| Triclopyr | 55335-06-3 | TCp1v2 | 298 | -9.7 | -13.5 | 8.5 |
| Pyrimethanil | 53112-28-0 | TCp1v2 | 299 | -11.2 | -13.4 | 6.9 |
| Fenhexamid | 126833-17-8 | TCp1v2 | 300 | -13.6 | -19.2 | -5.4 |

a. Source. IS indicates chemicals used for the initial screening assay development from stocks on hand at EPA/ORD/NHEERL/MED in Duluth. TCp1v2 indicates ToxCast p1_v2 chemical library obtained via Dr. Ann Richard, EPA/ORD/NCCT, Research Triangle Park, NC, USA.

b. Rank. The chemical rank compared to the others in this set of test chemicals for inhibition efficacy when tested at 200 µM. A rank of 1 indicates the chemical that inhibited the DIO1 activity the greatest in the single concentration screen.

c. % inhibition of the data from the three replicate runs of each chemical. Values for the n=3 data points are shown and sorted by median, minimum and maximum inhibition response.

**Supplemental Table 2.** Chemical samples that were identified as interfering with the assay and therefore were not assigned a rank, and those tested in initial screening at 1mM that produced no activity so could not be ranked based on 200 µM test concentration.

| Chemical | CASRN | Source[a] | Note |
|---|---|---|---|
| 3-Iodo-2-propynyl-N-butylcarbamate | 55406-53-6 | TCp1v2 | INT[b] |
| Methylene bis(thiocyanate) | 6317-18-6 | TCp1v2 | INT |
| *t*-Butylhydroquinone | 1948-33-0 | IS | 1mM[c] |
| Bisphenol A | 80-05-7 | IS | 1mM |
| Benzotriazole | 95-14-7 | IS | 1mM |
| Dibutylphthalate | 84-74-2 | IS | 1mM |
| Methimazole | 60-56-0 | IS | 1mM |
| 4-pentylaniline | 33228-44-3 | IS | 1mM |
| 2,2′,4,4′-Tetrabromo-diphenylether | 5436-43-1 | IS | 1mM |
| 4-Bromophenol | 106-41-2 | IS | 1mM |

a. Source. IS indicates chemicals used for the initial screening assay development from stocks on hand at EPA/ORD/NHEERL/MED in Duluth. TCp1v2 indicates ToxCast p1_v2 chemical library obtained via Dr. Ann Richard, EPA/ORD/NCCT, Research Triangle Park, NC, USA.

b. INT. Chemicals that were determined to interfere with the SK reaction, therefore, their activity could not be accurately estimated.

c. 1mM indicates these chemicals tested as part of the initial screening assay development were tested at the single concentration of 1mM rather than 200 µM as for the TCp1v2 chemicals. These did not produce significant inhibition and were not tested in concentration-response mode.