

**Responses of Substances Tested in at Least Two Different Types of *In Vitro* ER TA Assays**

Substance	Agonism Assays			Antagonism Assays		
	Mammalian Cell Reporter Gene	Yeast Reporter Gene	Mammalian Cell Proliferation	Mammalian Cell Reporter Gene	Yeast Reporter Gene	Mammalian Cell Proliferation
Acenaphthylene	neg ( 1 )*	neg ( 1 )			neg ( 2 )	
Acrinathrin	neg ( 1 )		neg ( 2 )			
Alachlor	pos ( 1 )	pos ( 2 )	neg ( 1 )			
Androstenedione	neg ( 1 )	neg ( 2 )				
Anthracene	neg ( 1 )	neg ( 1 )	neg ( 1 )		neg ( 2 )	neg ( 1 )
Apigenin	pos ( 6 )		pos ( 1/2 )	pos ( 3/5 )		pos ( 1 )
Aroclor 1221	pos ( 1 )	pos ( 1 )				
Aroclor 1248	neg ( 1 )	pos ( 1 )				
Atrazine	neg ( 3 )	pos ( 1/2 )	neg ( 1 )	neg ( 1 )	neg ( 1 )	
Bendiocarb	neg ( 2 )		neg ( 1 )			
Benz[ <i>a</i> ]anthracene	pos ( 4 )		neg ( 1 )			
Benzo[ <i>b</i> ]fluoranthene		neg ( 1 )	neg ( 1 )		neg ( 2 )	pos ( 1 )
Benzo[ <i>k</i> ]fluoranthene	pos ( 2/3 )	neg ( 1 )	neg ( 1 )		neg ( 2 )	pos ( 1 )
Benzo[ <i>b</i> ]fluorene	pos ( 2 )	neg ( 1 )			pos ( 1/2 )	

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Benzo[ghi]perylene	neg ( 1 )		neg ( 1 )			
Benzophenone-3		pos ( 1 )	pos ( 1 )			
Benzo[a]pyrene	pos ( 4/5 )	neg ( 1 )	neg ( 1 )	neg ( 2 )	pos ( 1/2 )	pos ( 1 )
Biochanin A	pos ( 5 )	pos ( 2/4 )	pos ( 1 )	pos ( 1/3 )	pos ( 2 )	neg ( 1 )
4,4'-Biphenol	pos ( 2 )	pos ( 2 )	pos ( 1 )			
4-Biphenylol		pos ( 4 )	pos ( 2 )			
Bis(2-ethylhexyl)phthalate	pos ( 1/3 )	pos ( 1/3 )	neg ( 4 )			
Bis(4-hydroxyphenyl)ethane	pos ( 2 )			neg ( 2 )		
Bis(4-hydroxyphenyl)methane	pos ( 2 )	pos ( 1 )		neg ( 2 )		
Bisphenol A	pos ( 15 )	pos ( 14 )	pos ( 8 )	neg ( 2 )		
Bisphenol A dimethacrylate	pos ( 1 )		pos ( 3/4 )			
Bisphenol B	pos ( 2 )	pos ( 2 )				
2,2-Bis( <i>p</i> -hydroxyphenyl)-1,1,1-trichloroethane (HPTE)	pos ( 13 )	pos ( 3 )		pos ( 5/8 )		
Butylated hydroxyanisole	pos ( 1 )	pos ( 1 )	pos ( 3/4 )			
Butylated hydroxytoluene	pos ( 1 )	pos ( 1/2 )	pos ( 1/3 )			

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Butyl benzyl phthalate	pos ( 3/4 )	pos ( 3 )	pos ( 5/6 )			
4- <i>tert</i> -Butylphenol		pos ( 3 )	pos ( 2 )			
Carbaryl	neg ( 2 )		neg ( 1 )			
Carbofuran		pos ( 1 )	neg ( 1 )			
Chlordane	pos ( 1 )	pos ( 2 )	neg ( 1 )			
Tris-4-(chlorophenyl)methane	pos ( 1 )	pos ( 1 )				
Tris-4-(chlorophenyl)methanol (Tris-OH)	pos ( 1 )	pos ( 1 )				
Chlorothalonil		pos ( 1 )	neg ( 1 )			
Cholesterol		neg ( 1 )	neg ( 1 )			
Chrysene	pos ( 2/4 )	neg ( 1 )	neg ( 1 )		neg ( 2 )	pos ( 1 )
Clomiphene	neg ( 1 )	pos ( 1 )				
Cortisol	neg ( 1 )	neg ( 3 )				
Coumestrol	pos ( 7 )	pos ( 4 )	pos ( 4 )	neg ( 2/3 )	neg ( 2 )	neg ( 2 )
<i>o</i> -Cresol	neg ( 1 )	neg ( 1 )				
<i>p</i> -Cresol	neg ( 1 )	neg ( 2 )				

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Cycloprothrin	pos ( 1 )		neg ( 2 )			
Cyfluthrin	pos ( 1 )		pos ( 2 )			
Cyhalothrin	pos ( 1 )		pos ( 2 )			
Cypermethrin	neg ( 2 )		pos ( 2 )			
2,4-Dichlorophenoxyacetic acid		pos ( 1 )	neg ( 1 )			
Daidzein	pos ( 5 )	pos ( 3/4 )	pos ( 2 )	neg ( 2 )		
Daidzin		pos ( 1/2 )	pos ( 1 )			
<i>o,p'</i> -DDD	pos ( 1 )	pos ( 4 )				
<i>p,p'</i> -DDD	pos ( 1/2 )	pos ( 1 )				
<i>o,p'</i> -DDE	neg ( 1 )	pos ( 4 )	pos ( 1 )			
<i>p,p'</i> -DDE	pos ( 2/4 )	neg ( 2 )	pos ( 2/3 )	neg ( 2 )		
<i>o,p'</i> -DDT	pos ( 7/8 )	pos ( 10 )	pos ( 3 )			
<i>p,p'</i> -DDT	pos ( 3 )	pos ( 4 )	pos ( 2 )			
Deltamethrin	pos ( 1 )	pos ( 1 )	pos ( 2 )			
Dexamethasone	pos ( 1 )	pos ( 1/4 )				
Diamyl phthalate		neg ( 1 )	neg ( 1 )			

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Dibenz[ <i>a,h</i> ]anthracene	pos ( 1/2 )	neg ( 1 )	neg ( 1 )		pos ( 2 )	pos ( 1 )
Dibutyl phthalate	pos ( 2/4 )	pos ( 3/4 )	pos ( 4/5 )			
2,5-Dichloro-4'-biphenylol	pos ( 1 )	pos ( 1 )	pos ( 2 )			
Dicofol	neg ( 1 )	pos ( 1 )	neg ( 1 )			
Dieldrin	pos ( 3 )	pos ( 4 )	pos ( 2/4 )		neg ( 1 )	neg ( 1 )
Diethylphthalate		pos ( 2 )	neg ( 2 )			
Diethylstilbesterol	pos ( 8 )	pos ( 11 )	pos ( 4 )			
Dihexylphthalate	pos ( 1/2 )	neg ( 1 )	neg ( 2 )			
Dihydrogenistein		pos ( 2 )	pos ( 1 )			
Dihydroglycitein		pos ( 2 )	neg ( 1 )			
Dihydrotestosterone	pos ( 1 )	pos ( 3/4 )				
Diisobutylphthalate		pos ( 2 )	pos ( 2 )			
Diisodecyl phthalate	neg ( 1 )	neg ( 1 )	neg ( 2 )			
Diisononyl phthalate	neg ( 1 )	pos ( 1 )	pos ( 2 )			
Dimethyl isophthalate		neg ( 1 )	neg ( 1 )			
Dimethyl sulfoxide	pos ( 2/3 )	pos ( 1 )	neg ( 1 )			

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Di- <i>n</i> -octyl phthalate	neg ( 1 )	neg ( 1 )				
Ditridecyl phthalate		neg ( 1 )	neg ( 2 )			
Diuron		pos ( 1 )	neg ( 1 )			
Endosulfan	pos ( 3/4 )	pos ( 3 )	pos ( 2 )			
-Endosulfan	pos ( 2 )	pos ( 1 )	pos ( 2 )			
-Endosulfan	pos ( 2 )	pos ( 1 )	pos ( 2 )			
Equol	pos ( 2 )	pos ( 4 )	pos ( 1 )			
17 -Estradiol	pos ( 2 )	pos ( 5 )	pos ( 2 )			
17 -Estradiol	pos ( 59 )	pos ( 31 )	pos ( 36 )	pos ( 2/5 )	pos ( 1/2 )	pos ( 1/2 )
17 -Estradiolbenzoate	pos ( 1 )	pos ( 1 )				
Estratriene-3,6 ,17 -triol	pos ( 1 )		pos ( 1 )			
Estratriene-3,6 ,17 -triol	pos ( 1 )		pos ( 1 )			
Estriol	pos ( 1 )	pos ( 4 )	pos ( 2 )			
Estrone	pos ( 3 )	pos ( 5 )	pos ( 5 )			
Ethanol	pos ( 1/2 )	pos ( 2/4 )	neg ( 4 )			
17 -Ethinyl estradiol	pos ( 2 )	pos ( 3 )	pos ( 2 )			

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4-Ethylphenol		neg ( 1 )	neg ( 1 )			
Fenarimol		pos ( 1 )	pos ( 1 )			
Flavone	pos ( 2/5 )		neg ( 2 )	pos ( 3 )		pos ( 1 )
Fluoranthene		neg ( 1 )	neg ( 1 )		neg ( 2 )	neg ( 1 )
Fluorene	pos ( 1/2 )	neg ( 1 )	neg ( 1 )		neg ( 2 )	neg ( 1 )
Formononetin	pos ( 3 )	pos ( 2/3 )		neg ( 2 )	pos ( 2 )	
Genistein	pos ( 11 )	pos ( 8 )	pos ( 4/5 )	pos ( 1/3 )	neg ( 2 )	pos ( 1/3 )
Genistin		pos ( 1/4 )	pos ( 1 )			
Glycitein		pos ( 2/3 )	neg ( 1 )			
Glycitin		neg ( 2 )	neg ( 1 )			
Heptachlor	neg ( 1 )		neg ( 2 )			
2,2',3,4,4',5,5'-Heptachlorobiphenyl	neg ( 1 )		neg ( 1 )	pos ( 2 )		pos ( 1 )
2,2',3',4,4',5,5'-Heptachloro-3-biphenylol	pos ( 1 )		neg ( 1 )	pos ( 1 )		pos ( 1 )
2,2',3,4',5,5',6-Heptachloro-4-biphenylol	pos ( 1 )		neg ( 1 )	pos ( 1 )		pos ( 1 )
Hexachlorobenzene	neg ( 1 )		neg ( 1 )			

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2,2',3,4,4',5'-Hexachlorobiphenyl	neg ( 1 )		neg ( 1 )	pos ( 2 )		pos ( 1 )
2,2',4,4',5,5'-Hexachlorobiphenyl	neg ( 1 )		neg ( 1 )	pos ( 2 )		pos ( 1 )
2,2',3,3',4',5'-Hexachloro-4-biphenylol	neg ( 1 )		neg ( 1 )	neg ( 1 )		pos ( 1 )
-Hexachlorocyclohexane	neg ( 1 )		pos ( 1 )			
Hexestrol	pos ( 1 )	pos ( 1 )				
2-Hydroxyestradiol	pos ( 2 )	pos ( 1 )				
4-Hydroxytamoxifen	pos ( 3/8 )	pos ( 1/4 )		pos ( 10 )	pos ( 5 )	pos ( 1 )
6-Hydroxytetralin	pos ( 1 )		neg ( 1 )			
ICI 164,384	neg ( 1 )	pos ( 2/4 )	neg ( 1 )	pos ( 5 )	pos ( 2 )	pos ( 1 )
ICI 182,780	pos ( 1/10 )	pos ( 2 )	neg ( 1 )	pos ( 14/15 )	neg ( 2 )	pos ( 3 )
Indeno(1,2,3- <i>cd</i> )pyrene	neg ( 1 )	neg ( 1 )	neg ( 1 )		neg ( 2 )	pos ( 1 )
Kaempferide	pos ( 1/3 )		neg ( 1 )	pos ( 3 )		pos ( 1 )
Kepone	pos ( 4/6 )	pos ( 1 )	pos ( 2 )	neg ( 2 )		
Lindane	pos ( 1/2 )	pos ( 1 )	neg ( 1 )			
Linuron	neg ( 1 )		neg ( 1 )			

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Luteolin				pos ( 1 )		pos ( 1 )
Methoxychlor	pos ( 11/12 )	pos ( 8/9 )	pos ( 2/3 )	neg ( 2 )	neg ( 1 )	
Mirex	neg ( 2 )		neg ( 1 )			
Nafoxidine	neg ( 1 )	pos ( 1/2 )				
Naphthalene	neg ( 1 )	neg ( 1 )			neg ( 2 )	
<i>cis</i> -Nonachlor	pos ( 1 )	pos ( 1 )				
<i>trans</i> -Nonachlor	pos ( 1 )	pos ( 1 )				
Nonylphenol	pos ( 1 )	pos ( 6 )				
<i>n</i> -Nonylphenol	pos ( 3 )	pos ( 1 )	pos ( 3 )			
<i>p</i> -Nonylphenol	pos ( 4 )	pos ( 13/14 )	pos ( 4 )			
Nordihydroguaiaretic acid	neg ( 1 )	pos ( 1 )				
19-Nortestosterone	pos ( 1 )	neg ( 1 )				
Octylphenol	pos ( 2 )	pos ( 1 )	pos ( 2 )			
4-Octylphenol	pos ( 2 )	pos ( 1 )	pos ( 1 )			
4- <i>t</i> -Octylphenol	pos ( 2/3 )	pos ( 8/9 )	pos ( 1/2 )			
Parathion	neg ( 2 )		neg ( 1 )			

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2',3,3',4',5-Pentachloro-4-biphenylol	neg ( 1 )		neg ( 1 )	pos ( 2 )		pos ( 1 )
Pentachlorophenol		pos ( 1 )	neg ( 1 )			
Permethrin	neg ( 1 )		pos ( 1 )			
Phenanthrene		neg ( 1 )	neg ( 1 )		neg ( 2 )	neg ( 1 )
Phenol		neg ( 1 )	neg ( 1 )			
Picloram		pos ( 1 )	neg ( 1 )			
Prochloraz		pos ( 1 )	neg ( 1 )			
Progesterone	neg ( 2 )	pos ( 1/3 )	neg ( 1 )			
4-Propylphenol		pos ( 1 )	neg ( 1 )			
Pyrene	pos ( 1 )		neg ( 1 )			
Pyrethrins	neg ( 1 )		neg ( 3 )			
Quercetin	pos ( 2 )		neg ( 1 )	neg ( 2 )		pos ( 1 )
Raloxifene	neg ( 5 )		neg ( 1 )	pos ( 5 )		pos ( 2 )
Simazine	pos ( 1/2 )		neg ( 1 )			
-Sitosterol	neg ( 2 )	pos ( 1 )	pos ( 1 )			

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Sumithrin	neg ( 1 )		pos ( 1 )			
Tamoxifen	pos ( 5/7 )	pos (1/3 )	neg ( 2 )	pos ( 7/8 )	pos ( 1 )	pos ( 2 )
Testosterone	neg ( 2 )	pos ( 5/9 )				
Tetrabromobisphenol A	neg ( 1 )	neg ( 1 )	pos ( 1 )			
2,2',5,5'-Tetrachlorobiphenyl	neg ( 1 )		neg ( 2 )			neg ( 2 )
3,3',5,5'-Tetrachlorobiphenyl	pos ( 1 )		pos ( 2 )			neg ( 2 )
2',3',4',5'-Tetrachloro-4-biphenylol	pos ( 7/8 )	pos ( 2 )	pos ( 1 )	pos ( 1/2 )		neg ( 1 )
3,3',5,5'-Tetrachloro-4,4'-biphenylol	pos ( 1 )	pos ( 1 )				
2,3,7,8-Tetrachlorodibenzo-p-dioxin	pos ( 1 )	pos ( 1 )	neg ( 3 )	pos ( 1 )		pos ( 3 )
Toxaphene	pos ( 2/3 )	pos ( 2 )	pos ( 3 )			
Tralomethrin	pos ( 1 )		pos ( 2 )			
Triadimefon		pos ( 1 )	pos ( 1 )			
2',4',6'-Trichloro-4-biphenylol	pos ( 6/7 )	pos ( 2 )	pos ( 2 )	pos ( 1 )		neg ( 2 )
Trifluralin		pos ( 1 )	neg ( 1 )			
-Zearalanol	pos ( 2 )	pos ( 3 )	pos ( 2 )			

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-Zearalanol		pos ( 3 )	pos ( 1 )			
Zearalanone		pos ( 2 )	pos ( 1 )			
-Zearalenol	pos ( 1 )	pos ( 3 )	pos ( 1 )			
-Zearalenol	pos ( 3 )	pos ( 2/3 )	pos ( 1 )			
Zearalenone	pos ( 9 )	pos ( 3 )	pos ( 3 )	pos ( 2/3 )		neg ( 1 )
Zeranol	pos ( 1 )		pos ( 2 )			

\* Numbers in parenthesis refer to the number of different assays in which the substance was tested; if the results were variable, the first number in parenthesis refers to the number of assays in which the substance was positive while the second number indicates the total number of tests conducted.

Abbreviations: *o,p'*-DDD = 2,4'-Dichlorodiphenyldichloroethane; *p,p'*-DDD = 2,2-Bis(4-chlorophenyl)-1,1-dichloroethane; *o,p'*-DDE = 1,1-Dichloro-2-(*o*-chlorophenyl)-2-(*p'*-chlorophenyl)ethylene; *p,p'*-DDE = 1,1-Dichloro-2,2-bis(*p*-chlorophenyl)ethylene; *o,p'*-DDT = 2-(*o*-Chlorophenyl)-2-(*p*-chlorophenyl)-1,1,1-trichloroethane; *p,p'*-DDT = 1,1,1-Trichloro-2,2-bis[*p*-chlorophenyl]ethane