

**Supplementary table 1.** Bitter receptors and their ligands with their half maximal effective conc. (EC50) values

Agonists											hTAS2R (mM)										Ref.
Receptors	1	3	4	5	7	8	9	10	13	14	16	38	39	40	43	44	46	47	49	50	
Absinthin								0.1		0.1							0.001	0.0001			Cowart et al., 1994; Meyerhof et al., 2010; Talmon et al., 2019
Adhumulone	0.0001													0.0003							Intelmann et al., 2009
Aesculin											4										Bufe et al., 2002
Acesulfame K															4.7	0.34					Meyerhof et al., 2010
Acetaminophen													3								Rodgers et al., 2006; Dotson, et al., 2008; Meyerhof et al., 2010
Acetylgenistin													0.125								Roland et al., 2013
Acetylthiourea												0.003									Meyerhof et al., 2010
Adlupulone	0.001									0.003											Intelmann et al., 2009
Aloin															0.003	0.03					Meyerhof et al., 2010
Allylisothiocyanate												0.01									Meyerhof et al., 2010
Amarogentin	0.03		0.3												0.03		0.01	0.003		0.1	Glendinning, 1994; Meyer



Caffeine					0.3			0.3		0.3					0.3				Burdock, 2005; Rodgers et al., 2006; Intelmann et al., 2009; Guinard et al., 1994
Chrysin									0.063			0.016							Roland et al., 2011
D-camphor			0.3					0.3	0.003							0.3			Meyerhof et al., 2010; Burdock., 2005
Caprolactam											10								Meyerhof et al., 2010
Carisoprodol									0.1						0.01				Meyerhof et al., 2010
Cascarillin	0.1							0.1	0.1						0.01	0.1			Meyerhof et al., 2010
Chalcone									0.032										Roland et al., 2011
Chloramphenicol	0.1					0.03		0.1				1		0.1		0.01			Meyerhof et al., 2010
Chlorhexidine									0.0001										Meyerhof et al., 2010
Chloropheniramine			0.03			0.01		0.01	0.1		0.1	0.1	0.1			0.1			Meyerhof et al., 2010
Chloroquine		0.01						10	0.01			0.1							Meyerhof et al., 2010
Clonixin									0.002										Levit et al., 2014
Cnicin																0.003			Meyerhof et al., 2010
Colchicine			0.1									3				0.3			Meyerhof et al., 2010
Colupulone	0.0001												0.0003						Intelmann et al., 2009





N,N'-ethylene thiourea																			
Falcarindiol								0.1						0.1					Meyerhof et al., 2010
Famotidine						0.3											0.3		Meyerhof et al., 2010
Fisetin										0.001									Roland et al., 2013
Formomonetin								0.5		0.5									Roland et al., 2013
Flavone								0.008		0.008									Roland et al., 2013
Flavanone								0.032											Roland et al., 2013
Flufenamic acid								0.0001											Meyerhof et al., 2010; Di Pizio et al., 2020
Fustin								0.5		0.25									Roland et al., 2013
Genistin								0.004		0.25									Roland et al., 2011; Drewnowski & Gomez-Carneros, 2000
Genkwanin										0.5									Roland et al., 2013
Gossypetin										0.25									Roland et al., 2013
Grosshemin													0.1	0.001					Meyerhof et al., 2010
Glycitein								0.5		0.5									Roland et al., 2013
Gly-leu	100																		Maehashi et al., 2008
Gly-phe	57.5																		Maehashi et al., 2008;



Cis-isocohumulone	0.001									0.001											Intelmann et al., 2009
Cis-isohumulone	0.0003									0.0003											Intelmann et al., 2009
Kaempferol										0.008			0.014								Roland et al., 2013; Levit et al., 2014
Limonin												0.1									Meyerhof et al., 2010; Drewnowski, & Gomez-Carneros, 2000; Guinard et al., 1994
Liquiritigenin										0.032			0.016								Roland et al., 2013
Leu-trp	3		3										3								Kohl et al., 2013
Leu-leu-leu			3																		Kohl et al., 2013
Liquiritigenin										0.032			0.016								Roland et al., 2013
Lupulon	0.0001									0.003											Intelmann et al., 2009
Luteolin										0.002											Roland et al., 2013
Malathion										0.05											Levit et al., 2014
Mefenamic acid										0.003											Levit et al., 2014; Ayenew et al., 2009; Alshehri et al., 2015
Methimazole												0.03									Meyerhof et al., 2010



4(6)-methyl-2-thiouracil											0.03								Meyerhof et al., 2010
Methyl beta-D-glucoside									15										Bufe et al., 2002
Methylthiourea											0.1								Dotson et al., 2008; Meyerhof et al., 2010
Miconazole								0.033											Levit et al., 2014
Morin								0.008			0.002								Roland et al., 2013
Myricetin								0.25			0.001								Roland et al., 2013
1-Naphthoic acid								0.003											Behrens et al., 2004
2-Naphthyl beta-D-glucopyranoside									0.4										Bufe et al., 2002
2-nitro phenyl beta-D-glucopyranoside									1.5										Bufe et al., 2002
6-Nitrosaccharin										0.1									Hamor, 1961
Noscapine								0.01											Meyerhof et al., 2010
Ofloxacin					0.2														Dotson et al., 2008
Orphenadrine															0.03				Meyerhof et al., 2010
Pantoprazole								0.1											Levit et al., 2014
Papaverine				0.01		0.01		0.01											Meyerhof et al., 2010; Guinard et al., 1994

Pemirolast									0.005										Levit et al., 2014
Parthenolide	0.1		0.03			0.1		0.03	0.003						0.1	0.001			Meyerhof et al., 2010
Pelargonidin chloride									0.063			0.032							Roland et al., 2013
Pentagalloylglucose (PGG)				0.003								0.003							Soares et al., 2013
Phloretin									0.016			0.008							Roland et al., 2013
Picrotin									0.03										Behrens et al., 2004
Picrotoxinin	1							1	0.003							0.01	1		Meyerhof et al., 2010
Pinoembrin									0.008			0.004							Roland et al., 2013
Piperonylic acid									0.1										Behrens et al., 2004
1,10-phenanthroline				0.1															Meyerhof et al., 2010
Phenyl beta-D-glucopyranoside										0.38									Sakurai et al., 2010; Bufe et al., 2002
Phe-leu	7.2 (EC50)																		Upadhyaya et al., 2010
L-phenylalanine	53.3																		Kohl et al., 2013; Burdock, 2005
Phe-trp	1			1															Kohl et al., 2013
Phe-phe-phe	0.37 (EC50)																		Upadhyaya et al., 2010
phenylethyl isothiocyanate												0.03							Meyerhof et al., 2010
Phenylthiocarbamide (PTC)												0.0004							Dotson et al., 2008; Meyerhof et al., 2010





Strychnine								0.003								0.001			Meyerhof et al., 2010
Sucrose Octaacetate																0.3			Burdock, 2005; Meyerhof et al., 2010
Sulfuretin									0.016			0.016							Roland et al., 2013
Tatridin A																0.03			Brockhoff et al., 2007
Tatridin B																0.1			Brockhoff et al., 2007; Meyerhof et al., 2010
(+)- Taxifolin									0.063			0.125							Roland et al., 2013; Intelmann et al., 2009
Teuflavin																0.03			Brockhoff et al., 2007
Thiamine	1											1							Meyerhof et al., 2010
Theobromine									1										Burdock, 2005; Guinard et al., 1994
Trans-isoadhumulone	0.0003								0.001										Intelmann et al., 2009
Trans-isocohumulone	0.001								0.001										Intelmann et al., 2009
Trans-isohumulone	0.0003								0.001										Intelmann et al., 2009
L-tryptophan			10																Kohl et al., 2013; Sonntag et al., 2010

Trp-leu			3																		Kohl et al., 2013
Trp-phe			0.3																		Kohl et al., 2013
Trp-pro			3																		Kohl et al., 2013
Trp-trp-trp	0.1		0.01						0.1			0.1									Kohl et al., 2013
Trp-trp	0.3		1									1									Kohl et al., 2013
Thujone, (-)- $\alpha$ -							0.1		0.003												Meyerhof et al., 2010
Tricetin												0.25									Roland et al., 2013
Umbelliferones									0.6												Rodgers et al., 2006
Vulgarolide																				0.1	Brockhoff et al., 2007
Xanthohumol	0.001								0.003				0.003								Intelmann et al., 2009
Xanthone									0.25			0.5									Roland et al., 2013
Xanthotoxin							0.1		0.1											0.1	Mancuso et al., 2015
Yohimbine	0.3		0.3				0.3					0.3								0.3	Meyerhof et al., 2010