

Biological Activities for Extracts of Stevia (*Stevia rebaudiana*)

Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Leaf Not Stated	Toxic Effect (general)	Plant	In Ration Rat	10.0 %	Inactive	No growth changes, no change in food intake or food efficiency. No change in size of liver, thyroid or adrenals. Over a 4 week period.	L01448
Leaf Paraguay	Toxic Effect (general)	Not Stated	Oral Rat	Not stated	Active	Paralysis and signs of suffering were produced five minutes following administration: animals died within two hours: no histological abnormality was observed.	T01719
Leaf Paraguay	Toxic Effect (general)	Hot H2O Ext	Oral Human Adult	Not stated	Inactive		N09716
Leaf USA	Toxic Effect (general)	Ext (50% stevioside)	IP Rat	LD50=3.4 g/kg			BO1029
Leaf Japan(cult)	Mutagenic Activity	ETOH(95%)Ext	Agar Plate	2.0 mg	Inactive	<i>Bacillus subtilis</i> h-17(rec+) <i>Bacillus subtilis</i> m-45(rec-) <i>Escherichia coli</i> wp-2 <i>Salmonella typhimurium</i> g-46 <i>Salmonella typhimurium</i> ta strains	W01182
Leaf Japan(cult)	Mutagenic Activity	Not Stated	Not Stated	Not stated	Inactive		M05678
Leaf Paraguay	Antifertility Effect	Hot H2O Ext	Oral Rat Female	Not stated	Active	Fertility in female rats was reduced to 80%, and termination of treatment returned fertility to normal. No side effects both in mothers and litters were observed.	T01719
Leaf Japan(cult)	Antifertility Effect	MEOH Ext	GI Rat Female	Variable	Equiv.	6/10 pregnancies (8/10 controls were pregnant).	T04639
Leaf + Stem Uruguay	Antifertility Effect	H2O Ext	Oral Rat Female	10.0 ml	Active	57-79% reduction in fertility.	A03469
Not Stated Thailand	Antifertility Effect	Not Stated	Rat	Not Stated	Inactive Inactive Inactive	No effect on male body and testicular weights. No effect on sperm count, morphology and motility. No effect on implantation and the fetus in females mated with plant extract-treated males.	BO1011
Leaf Brazil	Antifertility Effect	Not Stated	Oral Rat Male	Not Stated	Inactive	Seminal vesicle weight fell by 60% but no effect on fertility could be seen.	BO1024

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Leaf Paraguay	Antiimplantation Effect	ETOH(95%)Ext	SC Rat Female	Not Stated	Inactive		X01111
Leaf Paraguay	Sperm Count Decrease	H2O Ext	IG Rat Male	1.33 gm	Active		L21116
Leaf Paraguay	Contraceptive and/or Interceptive Effect	Hot H2O Ext	Oral Rat Female	Not Stated	Inactive		T01719
Leaf Paraguay	Fetotoxicity	Hot H2O Ext	Oral Rat Female	Not Stated	Inactive	No effect on pregnancy.	T01719
Leaf Brazil	Hypoglycemic Activity	H2O Ext	Oral Rabbit	Not Stated	Inactive		L01973
Aerial Parts Brazil	Hypoglycemic Activity	Hot H2O Ext	Oral Human Adult	Not Stated	Active	Accentuated hypoglycemic response in the majority of 15 volunteers (19-25 years old) taking tea of stevia in a GTT test.	M11953
Leaf Paraguay	Hypoglycemic Activity	Hot H2O Ext	Oral Human Adult	Not Stated	Active	Mean drop in blood sugar of 35.2% 6-8 hours after ingestion.	A07092
Leaf Not Stated	Hypoglycemic Activity	Not Stated	IG Dog	6.0 ml	Inactive		K17226
Leaf Paraguay	Hypoglycemic Activity	H2O Ext	IG Rat Male	1.33 gm	Inactive		L21116
Leaf Paraguay	Hypoglycemic Activity	Hot H2O Ext	Oral Human Adult	Not Stated	Active	Glucose tolerance test given to 15 normal subjects between ages of 19 + 25. Daily dose of stevia tea administered in 4 divided doses was equivalent to 250 mg per subject of stevioside. There was an accentuated hypoglycemic response.	N09700
Aerial Parts Indonesia	Antihyperglycemic Activity	Not Stated	IG Rabbit	Variable	Active	vs. glucose tolerance test.	K07934
Leaf Not Stated	Antihyperglycemic Activity	Plant	In Ration Rat	10.0 %	Active	Rats on high carbohydrate diet.	L01448
Leaf Brazil	Glucose Tolerance Enhancement	H2O Ext	Oral Human Adult	5 g	Active	5 gms administered to normal volunteers at regular 6 hr intervals for 3 days. Glucose tolerance tests performed before and after extract administration. The extract increased glucose tolerance and decreased plasma glucose levels during the test and after overnight fasting.	BO1025

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Leaf Not Stated	Liver Glycogen Decrease	Plant	In Ration Rat	10.0 %	Active	Rats on high carbohydrate diet.	L01448
Aerial Parts Brazil	Hypotensive Activity	Hot H2O Ext	IV Rat	1.0 mg/kg	Active		M12483
Aerial Parts Brazil	Hypotensive Activity	Hot H2O Ext	Oral Human Adult	3.0 gm	Active	Depressed systolic arterial pressure by 9.5% in 10 subjects taking one oral dose of aqueous extract.	M12483
Aerial Parts Brazil	Hypotensive Activity	Hot H2O Ext	Oral Human Adult	Not Stated	Active	Depressed systolic and diastolic arterial pressure by 9.5% in 18 subjects (20-40 yrs old) taking tea of stevia daily for 30 days. Also a discrete pronation of electric systolic (QTC) in the ECG.	M12483
Leaf Paraguay	Hypotensive Activity	H2O Ext	IG Rat Male	1.3 gm	Active	Results significant at p < 0.05 level.	K28973
Leaf Paraguay	Hypotensive Activity	Hot H2O Ext	Oral Human Adult	3.0 gm	Weak Activity	A single oral dose equal to 3.0 gm of leaves was administered to each of 10 normal subjects. Some lowering of systolic pressure(9.5%) but no effect on diastolic pressure. Bradycardia was noted as well as a discrete shortening of the duration of extrasystole.	N09716
Leaf Paraguay	Hypotensive Activity	Hot H2O Ext	Oral Human Adult	Not Stated	Weak Activity	Administration to 18 normal subjects, 20-40 years of age daily for 30 days. Lowering of the systolic and diastolic pressure by about 9.5% and prolongation of electrosystole (QTC) seen.	N09716
Leaf Brazil	Hypotensive Activity	Leaf	Oral Rat Male	2.67 g	Active Active	vs. hypertensive-induced rats. vs. normotensive rats. Mean arterial pressure reduced in both groups.	BO1017
Leaf Brazil	Hypotensive Activity	Infusion	Oral Human Adult	200-220 mg	Active		BO1030
Leaf Brazil	Cardiovascular Activity	Infusion	Oral Human Adult	200-220 mg	Active	Prolonged the duration of the QRS and QTC in ECG.	BO1030
Stem Japan	Vasodilatory Activity	Fermented Ext	Topical Human Adult	½ to 1/5 Conc.	Active		BO1028
Leaf Paraguay	Inotropic Effect Positive	Not Stated	Frog heart	0.015 mg/ml	Active		N09716

Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Aerial Parts Brazil(cult)	Bradycardia Activity	Hot H2O Ext Hot H2O Ext	IV Rat Oral Human Adult	1.0 mg/kg 3.0 gm	Active Active		M12483
Leaf Paraguay	Diuretic Activity	H2O Ext	IG Rat Male	1.3 gm	Active	Results significant at p < 0.05 level.	K28973
Leaf Paraguay	Natriuretic Activity	H2O Ext	IG Mouse Male	1.3 gm	Active	Glomerular filtration rate constant. Results significant at p < 0.05 level.	K28973
Leaf Paraguay	Renal Effects	H2O Ext	IV Rat Male	0.050 mg	Active	Renal water, Na and K excretion. In antidiuresis.	L06736
Leaf Paraguay	Renal Effects	H2O Ext	IV Rat Male	0.050 mg	Active	Increased reabsorption of water by the collecting duct.	L06736
Leaf Paraguay	Renal Effects	H2O Ext	IV Rat Male	0.050 mg	Active	In the diuresis group the extract significantly increased free water clearance.	L06736
Leaf Paraguay	Renal Effects	H2O Ext	IG Mouse Male	1.3 gm	Active	Increase in renal plasma flow seen in rats treated for 60 days.	K28973
Leaf Brazil	Renal Effects	Leaf	Oral Rat Male	2.67 g	Active Active Active Active	Increased glomerular filtration in hypertensive rats on stevia. Increased renal plasma flow in both normo- and hypertensive rats. Increased urinary flow in normo- and hypertensive rats. Increased sodium excretion in both normo- and hypertensive rats.	BO1017
Leaf Japan	Anti-inflammatory Activity	Not Stated	External Mouse	IC50=0.6 mg	Active	vs. 12-o-tetradecanoylphorbol-13-acetate(TPA)-induced ear inflammation.	K11173
Leaf Japan	Anti-inflammatory Activity	MEOH Ext	External Mouse	2.0 mg	Active	Inhibition ratio 89. vs. 12-o-tetradecanoylphorbol-13-acetate(TPA)-induced ear inflammation.	K11173
Leaf Japan	Cytotoxic Activity	MEOH Ext	Cell Culture	50.0 mcg/ml	Weak Activity	Ca-9kb 31% inhibition.	K27314
Leaf Not Stated	Antiandrogenic Effect	Hot H2O Ext	IG Rat Male	10.0 mg/kg	Inactive		T15862
Leaf Paraguay	Testosterone Level Decreased	H2O Ext	IG Rat Male	1.33 gm	Active	Testosterone level decreased, with no alteration in luteinizing hormone level.	L21116

Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Leaf Brazil	Anticaries Activity	H2O Ext	Broth Culture	1.5%	Active	vs. <i>Streptococcus mutans</i> stimulated plaque fermentation. Inhibited the synthesis of insoluble polysaccharides.	M25425
Leaf Not Stated	Biochemical Pathway Inhibition	H2O Ext	Rat mitochondria	Not Stated	Active	Inhibited oxidative phosphorylation, ATPase activity, NADH-oxidase activity, succinate-oxidase activity, succinate dehydrogenase and L-glutamate dehydrogenase. ADP/O ratio was decreased.	BO1026
Stem Japan	Analgesic Activity	Fermented Ext	Topical Human Adult	½ to 1/5 Conc.	Active	Reduced pain from a scald and healed the inflamed part over 5 days.	BO1028
Stem Japan	Antiacne Activity	Fermented Ext	Topical Human Adult	½ to 1/5 Conc.	Active		BO1028
Stem Japan	Antipruritic Activity	Fermented Ext	Topical Human Adult	½ to 1/5 Conc.	Active	Reduced itching in heat rash and allergic irritation.	BO1028
Leaf USA	Antimicrobial Activity	Not Stated	Not Stated	Not Stated	Active	<i>Pseudomonas aeruginosa</i> <i>Proteus vulgaris</i>	BO1029
Leaf Japan(cult)	Antibacterial Activity	Chromatographic Fract	Agar Plate Agar Plate	Not Stated Not Stated	Active Active	<i>Proteus vulgaris</i> <i>Pseudomonas aeruginosa</i>	N10050
Fermented Leaf Not Stated	Antibacterial Activity	Fermented	Agar Plate	40% 40% 40% 40% 40% 40% 40% 50% 50% 50% 50%	Active Active Active Active Active Active Active Inactive Inactive Inactive Inactive	<i>Bacillus cereus</i> <i>Escherichia coli</i> <i>Salmonella enteritidis</i> <i>Salmonella typhimurium</i> <i>Staphylococcus aureus</i> <i>Vibrio parahaemolyticus</i> <i>Yersinia enterocolitica</i> <i>Bifidobacterium adolescentis</i> <i>Bifidobacterium longum</i> <i>Lactobacillus acidophilus</i> <i>Lactobacillus casei</i>	L21358
Leaf + Stem Japan(cult)	Antiviral Activity	Hot H2O Ext	Cell Culture	Variable	Active	<i>Rotavirus</i>	L13068

Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Leaf Brazil	Antifungal Activity	ETOH(95%)Ext ETOH(95%)Ext ETOH(95%)Ext ETOH(95%)Ext ETOH(95%)Ext ETOH(95%)Ext ETOH(95%)Ext H2O Ext H2O Ext H2O Ext H2O Ext H2O Ext H2O Ext H2O Ext	Agar Plate	Not Stated	Active Inactive Inactive Inactive Inactive Inactive Inactive Inactive Active Active Active Inactive Inactive Inactive	<i>Sclerotinia trifoliorum</i> <i>Alternaria tenuissima</i> <i>Aspergillus flavus</i> <i>Botriodiplodia theobromae</i> <i>Diplodia species</i> <i>Mucor spinescence</i> <i>Phytophthora palmivora</i> <i>Diplodia species</i> <i>Mucor spinescence</i> <i>Sclerotinia trifoliorum</i> <i>Alternaria tenuissima</i> <i>Aspergillus flavus</i> <i>Botriodiplodia theobromae</i> <i>Phytophthora palmivora</i>	T12003
Leaf Brazil	Antiyeast Activity	ETOH(95%)Ext ETOH(95%)Ext ETOH(95%)Ext ETOH(95%)Ext ETOH(95%)Ext ETOH(95%)Ext ETOH(95%)Ext ETOH(95%)Ext ETOH(95%)Ext ETOH(95%)Ext ETOH(95%)Ext	Agar Plate	Not Stated	Active Active Active Active Active Active Active Active Inactive Inactive Inactive Inactive	<i>Candida albicans</i> <i>Hansenula polymorpha</i> <i>Saccharomyces boulardii</i> <i>Saccharomyces cerevisiae</i> <i>Saccharomyces rosei</i> <i>Saccharomyces species</i> <i>Saccharomyces uvarum</i> <i>Candida krusei</i> <i>Candida lusitaniae</i> <i>Candida pseudotropicalis</i> <i>Cryptococcus neoformans</i>	T12003
Leaf Brazil	Antiyeast Activity	H2O Ext H2O Ext H2O Ext H2O Ext H2O Ext H2O Ext H2O Ext H2O Ext H2O Ext H2O Ext H2O Ext	Agar Plate	Not Stated	Active Active Active Active Active Inactive Inactive Inactive Inactive Inactive Inactive	<i>Saccharomyces boulardii</i> <i>Saccharomyces cerevisiae</i> <i>Saccharomyces rosei</i> <i>Saccharomyces species</i> <i>Saccharomyces uvarum</i> <i>Candida albicans</i> <i>Candida krusei</i> <i>Candida lusitaniae</i> <i>Candida pseudotropicalis</i> <i>Cryptococcus neoformans</i> <i>Hansenula polymorpha</i>	T12003
Aerial Parts Not Stated	Sweetening Effect	Not Stated	Oral Human Adult	Not Stated	Active		N12519
Entire Plant Paraguay	Sweetening Effect	Plant	Oral Human Adult	Not Stated	Active		A03990

Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Leaf Not Stated	Sweetening Effect	H2O Ext	Oral Human Adult	Not Stated	Active		L01440
Leaf Not Stated	Sweetening Effect	H2O Ext	Oral Human Adult	Not Stated	Active	Mother liquor after stevioside isolation used to improve taste of saccharin.	L01441
Leaf Japan(cult)	Sweetening Effect	H2O Ext	Oral Human Adult	Not Stated	Active		N00921
Leaf Japan(cult)	Sweetening Effect	Not Stated	Oral Human Adult	0.01%	Active		N01720
Leaf Paraguay	Sweetening Effect	Leaves	Oral Human Adult	Not Stated	Active		A00045
Leaf Paraguay	Sweetening Effect	Not Stated	Oral Human Adult	Not Stated	Active	Leaf-derived antacid is marketed commercially in Paraguay with government permission.	T01719
Leaf Not Stated	Sweetening Effect	Not Stated	Oral Human Adult	1:1	Active	A low calorie sweetener, suitable for use in dietetic foods, was prepared by mixing powdered sucrose (1 part) with powdered stevia extract. The prepared sweetener has a sweetness equal to sucrose and the bitterness of the stevia extract is reduced.	N12518
Leaf Not Stated	Sweetening Effect	Not Stated	Oral Human Adult	Not Stated	Active		N12522
Leaf Japan	Sweetening Effect	Not Stated	Oral Human Adult	Not Stated	Active		M26401
Leaf Japan(cult)	Sweetening Effect	ETOH(95%)Ext	Oral Human Adult	Not Stated	Active		N10148
Leaf Japan(cult)	Sweetening Effect	H2O Ext	Oral Human Adult	0.2%	Active	An anticavity sweetener is formulated from palatinose and stevia extract.	M05049
Leaf Japan(cult)	Sweetening Effect	H2O Ext	Oral Human Adult	Not Stated	Active		M05046
Leaf Japan(cult)	Sweetening Effect	H2O Ext	Oral Human Adult	Variable	Active		M05045
Leaf Japan(cult)	Sweetening Effect	H2O Ext	Perlingual Human Adult	Not Stated	Active		K10134

Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Leaf Japan(cult)	Sweetening Effect	Hot H2O Ext	Oral Human Adult	Variable	Active		M20860
Leaf Japan(cult)	Sweetening Effect	Not Stated	Oral Human Adult	Not Stated	Active		N05696
Leaf Paraguay	Sweetening Effect	Leaves	Oral Human Adult	Undiluted	Active		A08671
Leaf Paraguay	Sweetening Effect	Leaves	Oral Human Adult	Undiluted	Strong Activity		M05164
Leaf Paraguay	Sweetening Effect	Leaves	Oral Human Adult Male	Undiluted	Strong Activity		N15780
Leaf USA(cult)	Taste Aversion(conditioned)	Butanol Ext Ether Ext ETOH(80%)Ext H2O Ext	Drinking Water Gerbil	2.0 mg/ml 5.0 mg/ml 2.0 mg/ml 2.0 mg/ml	Active Inactive Active Active		M23039
Leaf Japan(cult)	Fragrance Use	Glycoside Mixture	Oral Human Adult	Not Stated	Active		M05678
Seed Brazil	Plant Root Growth Stimulant	Not Stated	Not Stated	Not Stated	Active		N12132
Leaf Paraguay	Antimitotic Activity(plant cells)	H2O Ext	<i>Allium cepa</i> Bulb Cells	Not Stated	Inactive		J08235
Leaf Paraguay	Antimitotic Activity(plant cells)	Hot H2O Ext		Not Stated	Inactive	vs. <i>Allium cepa</i> root tips c-mitotic effect	L00398
Leaf Brazil(cult)	Feeding Deterrent(insect)	Leaves	Insect	Undiluted	Strong Activity	<i>Epicauta adomaria</i>	T01665

Biological Activities for Compounds of Stevia (*Stevia rebaudiana*)

Compound	Activity Tested For	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Stevoside Rebaudiosides A-C Steviolbioside Dulcoside A	Toxic Effect (general)	Oral Mice	2 g/kg 2 g/kg 2 g/kg 2 g/kg	Inactive		BO1029
Steviol	Genotoxic Effect	In vitro	62.5 mcg/ml 125 mcg/ml 250 mcg/ml 500 mcg/ml	Inactive		BO1004
Steviol	Genotoxic Effect	Oral Mice	250 mg/kg 500 mg/kg 1000 mg/kg 2000 mg/kg	Inactive	DNA of the stomach, colon, liver, kidney and testis were not damaged.	BO1004
Steviol	Mutagenic Activity	Cell Culture	Not Stated	Active	<i>S. typhimurium</i> TM677 mutation assay.	BO1007
Stevioside	Mutagenic Activity	Cell Culture	50 mg	Inactive	<i>Salmonella typhimurium</i> TA98 & TA100 by the in vitro Ames test.	BO1015
Steviol	Mutagenic Activity	Cell Culture	2 mg	Inactive	<i>Salmonella typhimurium</i> TA98 & TA100 by the in vitro Ames test.	BO1015
Stevioside	Mutagenic Activity	In vitro Cell Culture In vivo Mouse	Not Stated	Inactive Inactive Inactive		BO1016
Steviol	Mutagenic Activity	Cell Culture	Not Stated	Active Active Active Active	<i>Salmonella typhimurium</i> TM677. <i>S. typhimurium</i> TA1535/pSK1002. Caused chromosome aberrations in hamster lung fibroblast cells. Gene mutations in hamster lung fibroblast cells.	BO1016
Stevioside	Antireproductive Activity	Oral Hamster Male	0 g/kg 0.5 g/kg 1 g/kg 2.5 g/kg	Inactive	No abnormalities in growth and fertility seen.	BO1022

Compound	Activity Tested For	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Stevioside	Antireproductive Activity	Oral Hamster Female	0 g/kg 0.5 g/kg 1 g/kg 2.5 g/kg	Inactive	No abnormalities in growth and fertility. No effect on pregnancy and no fetal abnormalities seen.	BO1022
Stevioside	Hypoglycemic Activity	Injection Rat	0.025 g/kg	Inactive	Did not induce hypoglycemia.	BO1003
Stevioside	Hypoglycemic Activity	IV Rat	0.2 g/kg	Inactive Active Inactive	Did not alter blood glucose response when administered with glucose in non-diabetic rats. Enhanced insulin levels. No effect on glucagon levels.	BO1009
Stevioside	Antihyperglycemic Activity	IV Rat	0.2 g/kg	Active	Stevioside, administered with glucose, suppressed glucose response (648 stevioside vs 958 control), increased the insulin response and suppressed the glucagon level in a type 2 diabetic rat model.	BO1009
Stevioside	Antihyperglycemic Activity	Oral Rat	0.025 g/kg	Active	In a type 2 diabetic rat model stevioside had an antihyperglycemic effect, enhanced first-phase insulin response and suppressed glucagon levels.	BO1003
Stevioside	Insulin Enhancement	Rat	0.025 g/kg	Active	Augmented insulin content in the beta-cell line INS-1.	BO1003
Stevioside	Insulin Clearance	IV Rat	4 mg/kg 8 mg/kg 12 mg/kg 16 mg/kg	Inactive	No significant change in insulin clearance at all concentrations.	BO1020
Stevioside	Insulinotropic Activity	In vitro - mouse islet cells	1nmol/L	Active	Enhanced insulin secretion in the presence of 16.7 mmol/L glucose. Only potentiated insulin secretion at or above 8.3 mmol/L glucose.	BO1013
Stevioside	Insulinotropic Activity	In vitro - mouse islet cells	1 mmol/L	Active	Enhanced insulin secretion in the presence of 16.7 mmol/L glucose. Only potentiated insulin secretion at or above 8.3 mmol/L glucose.	BO1013
Stevioside	Pancreatic beta-cell stimulation	Cell Culture	1-100 micromol/L	Active	Potentiated insulin secretion from INS-1 cells. Insulin secretion effect deemed to occur via direct action on beta cells.	BO1013
Steviol	Pancreatic beta-cell stimulation	Cell Culture	10 nmol/L to 10 micromol/L	Active	Potentiated insulin secretion from INS-1 cells. Insulin secretion effect deemed to occur via direct action on beta cells.	BO1013

Compound	Activity Tested For	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Stevioside	Antiketogenic Activity	Rat Liver	2.5 mM	Active	Inhibited ketogenesis by 66.3%.	BO1023
Steviol	Glucose Absorption Inhibition	Rat renal tubules	Not Stated	Active	Inhibited glucose production and oxygen uptake in rat renal cortical tubules.	BO1027
Stevioside	Glycogenic Activity	Oral Rat	200 mumol	Active	Increased glycogen deposition in the liver, with or without administration of fructose in 24-hr fasting rats. Both concentrations increased hepatic glycogen before fasting.	BO1018
		H2O Ext Rat H2O Ext Rat	1 mM 2 mM	Active Active		
Steviol	Glycogenic Activity	Oral Rat	200 mumol	Active	Increased glycogen deposition in the liver, with or without administration of fructose in 24-hr fasting rats.	BO1018
		H2O Ext Rat H2O Ext Rat	1 mM 2 mM	Inactive Inactive		
Stevioside	Hypotensive Activity	Oral Rat	0.025 g/kg	Active	Suppressed both systolic and diastolic blood pressure.	BO1003
Stevioside	Hypotensive Activity	Nasogastric Dog	200 mg/kg	Active	Reduced blood pressure in healthy dogs.	BO1005
Stevioside	Hypotensive Activity	IV Dog	Not Stated	Active	Reduced blood pressure. Lack of activity shows the hypotensive effect is not related to the central nervous system.	BO1005
		IV Dog left vertebral artery	Not Stated	Inactive		
Stevioside	Hypotensive Activity	Dog	Not Stated	Active	Hypotensive in renal hypertensive dogs.	BO1005
Stevioside	Hypotensive Activity	Cell Culture rat aortic smooth muscle cells	Not stated	Active	Inhibited the stimulatory effects of vasopressin and phenylephrine on intracellular calcium, indicating its hypotensive effect is due to inhibition of calcium influx.	BO1005
Stevioside	Hypotensive Activity	IP Rat	50 mg/kg	Active	vs. normotensive rats, spontaneously hypertensive rats, deoxycorticosterone acetate-salt sensitive hypertensive rats and renal hypertensive rats.	BO1008
Stevioside	Hypotensive Activity	IP Rat	100 mg/kg	Active	vs. spontaneously hypertensive rats and normotensive rats.	BO1008
			200 mg/kg	Active		
Stevioside	Hypotensive Activity	IP Rat	100 mg/kg	Active	vs. deoxycorticosterone acetate-salt sensitive hypertensive rats	BO1008
			200 mg/kg	Active		
			400 mg/kg	Active		

Compound	Activity Tested For	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Stevioside	Hypotensive Activity	IP Rat In vitro rat aorta	25 mg/kg Not Stated	Active Active Inactive Inactive	vs. spontaneously hypertensive rats. vs. vasopressin-induced vasoconstriction. vs. phenylephrine- and KCL-induced vasoconstriction. vs. vasopressin-induced vasoconstriction in Ca(2+)-free medium.	BO1010
Stevioside	Hypotensive Activity	Oral Human Adult	500 mg	Active	In 60 hypertensive patients (vs 46 controls) stevioside reduced systolic and diastolic blood pressure; effect persisted through the year of treatment. No effect seen on lipid and glucose parameters.	BO1012
Stevioside	Hypotensive Activity	IV Rat	50 mg/kg 100 mg/kg 200 mg/kg	Active Active Active	vs. spontaneously hypertensive rats. Reduced both systolic (4.2%) and diastolic (5.6%) blood pressure. Lowering effect lasted for 60 minutes with 200 mg/kg dose. No change in serum catecholamines seen.	BO1014
Stevioside	Hypotensive Activity	Rat	Not Stated	Active	Provoked hypotension, diuresis and natriuresis in normal and hypertensive rats. Normal rats had an increase in renal plasma flow (RPF) with glomerular filtration rate (GFR) constant. Caused an increase in RPF and GFR in hypertensive rats.	BO1019
Stevioside	Vasodilatory Activity	Rat	Not Stated	Active		BO1019
Stevioside	Renal Effects	IV Rat	4 mg/kg 8 mg/kg 12 mg/kg 16 mg/kg	Inactive Active Active Active	At doses above 4 mg/kg stevioside increased sodium excretion, urinary flow and glucose clearance indicating it has diuretic and natriuretic properties and is able to prevent reabsorption of glucose in renal tubules.	BO1020
Steviol glycosides + stevioside + rebaudiosides + dulcoside A	Anti-inflammatory Activity	Mice	MIC=54.1-291.6 mcg	Active	vs. TPA-induced ear inflammation.	BO1006
Stevioside mixture	Anti-tumor promoting Activity	Mice	1 mg 0.1 mg	Active Active	Inhibited the promoting effect of TPA on skin tumor formation initiated with 7,12-dimethylbenz(a)anthracene.	BO1006
Stevioside	Cariogenic Activity	Oral Rat	0.5%	Inactive		BO1021
Rebaudioside A	Carcinogenic Activity	Oral Rat	0.5%	Inactive		BO1021
Flavonoid Fraction	Antibacterial Activity	Agar Plate	Not Stated	Active	<i>Bacillus subtilis</i> <i>Escherichia coli</i> <i>Staphylococcus aureus</i>	K24643

Compound	Activity Tested For	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Flavonoid Fraction	Peroxidase Inhibition	Human Adult	Not Stated	Active		K24643
Flavonoid Fraction	Protease Stimulation	Not Stated	Not Stated	Active	Increased papain activity.	K24643

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