

**Screening for Antitumor Efficacy
from the Polygonatum officinale All in Korea**

SANG RAE LEE, HIDEJI ITOKAWA,
KOICHI TAKEYA,

Department of prarmacology, Tokyo
University of prarmacy and Life Science

Cytotoxic activity on P388 cells

The MTT(3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide) colorimetric assay was performed in a 96-well plate. The blue formazan produced by the mitochondrial dehydrogenase of viable cells was measured spectrophotometrically. 100 μ l of RPM-1640 medium supplemented with 5% fetal calf serum and 100 μ g/ml of kanamycine and containing mouse P388 leukemia cells (3×10^4 cells/ml) was added to each well. After overnight incubation (37 $^{\circ}$ C, 5% CO $_2$), 100, 30, 10, 3, 1, 0, 0.3 and 0.1 μ g/ml of sample solutions were added to the wells and the plates were incubated for 48h. Then, 20 μ l of MTT was added to each well and the plates were incubated for 4h. The resulting formazan was dissolved in 100 μ l of 10% SDS (Sodium dodecyl sulfate) containing 0.01 N HCl. Each well was mixed gently with a pipet for 1 or 2 min and the plate was read on a microplate reader (Tosoh MPR-A4i) at 540nm. The IC $_{50}$ (μ g/ml) value was defined as the concentration of sample which achieved 50% reduction of viable cells with respect to the control.

Cytotoxic Activities On P388 Cells

No.	Scientific Name	Crude Drug	Geographical Zone	IC ₅₀	Concentration($\mu\text{g}/\text{ml}$)/T/C(%)								
					100	30	10	3	1	0.3	0.1		
①*	Polygonatum Officinale All.	玉竹											
	HOT-VAPOUR TREATED PRODUCTS	九蒸九曝品	SUNNONG WON	6.4	5	4	7	88	99	95	95	95	95
②	NATURAL PRODUCTS	天然品	SUNNONG WON	15.0	28	31	58	73	80	92	92	92	92

* NINE TIMES BOILED IN THE HOT-VAPOUR AND DRIED IN THE SUN