

DAFTAR ISI

HALAMAN JUDUL	i
HALAMAN PENGESAHAN	ii
HALAMAN PERNYATAAN	iii
PRAKATA	iv
DAFTAR ISI	vi
DAFTAR TABEL.....	viii
DAFTAR GAMBAR	ix
DAFTAR LAMPIRAN	x
DAFTAR SINGKATAN	xi
INTISARI	xiii
<i>ABSTRACT</i>	xiv
BAB I PENDAHULUAN	1
I.1. Latar Belakang	1
I.2. Perumusan Masalah	4
I.3. Tujuan Penelitian	4
I.4. Keaslian Penelitian	5
I.5. Manfaat Penelitian	7
BAB II TINJAUAN PUSTAKA	8
II.1. Tinjauan Pustaka	8
II.1.1. Anatomi dan Fisiologi Ginjal	8
II.1.2. Gagal Ginjal Kronik.....	10
II.1.3. Cedera Tubulus	13
II.1.4. <i>Unilateral Ureteral Obstruction</i>	16
II.1.5. E-Cadherin, Vimentin dan <i>Superoxide Dismutase 1</i>	17
II.1.6. Asam Klorogenat	20
II.2. Landasan Teori	23
II.3. Kerangka Teori	26
II.4. Kerangka Konsep	27
II.5. Hipotesis	27
BAB III METODE PENELITIAN	29
III.1. Jenis dan Rancangan Penelitian	29
III.2. Variabel Penelitian	29
III.3. Definisi Operasional	30
III.4. Bahan dan Alat Penelitian	32
III.5. Jalannya Penelitian	36
III.6. Analisis Hasil	42
BAB IV HASIL PENELITIAN DAN PEMBAHASAN	45
IV.1. Hasil Penelitian	45
IV.2. Pembahasan	55
BAB V KESIMPULAN DAN SARAN	64
V.1. Kesimpulan	64
V.2. Saran	64
V.3. Ringkasan	65



UNIVERSITAS
GADJAH MADA

PERANAN ASAM KLOGENAT PADA MODEL MENCIT UNILATERAL URETERAL OBSTRUCTION

Kajian terhadap Cedera

Tubulus, Ekspresi mRNA E-Cadherin, Vimentin, dan Superoxide Dismutase 1

GINA ANDYKA HUTASOIT, Dr. dr. Dwi Cahyani Ratna Sari, M.Kes., PA(K).; dr. Nur Arfian, Ph.D

Universitas Gadjah Mada, 2018 | Diunduh dari <http://etd.repository.ugm.ac.id/>

DAFTAR PUSTAKA	82
LAMPIRAN	87

DAFTAR TABEL

Tabel 1	Prevalensi gagal ginjal kronik di Indonesia tahun 2013.....	11
Tabel 2	Stadium gagal ginjal kronik	13
Tabel 3	Jumlah mencit hasil perlakuan	46

DAFTAR GAMBAR

Gambar 1	Ginjal pada potongan longitudinal	8
Gambar 2	Interaksi sel ginjal yang mengalami UUO	14
Gambar 3	Gambaran skematik model UUO	17
Gambar 4	Struktur kimia komponen bioaktif asam klorogenat	21
Gambar 5	Gambaran mikroskopis ginjal dengan pewarnaan PAS	47
Gambar 6	Diagram batang rata-rata skor cedera tubulus.....	49
Gambar 7	Gambaran <i>band</i> ekspresi mRNA E-cadherin dan GAPDH	50
Gambar 8	Diagram batang rata-rata ekspresi mRNA E-cadherin	51
Gambar 9	Gambaran <i>band</i> ekspresi mRNA vimentin dan GAPDH	52
Gambar 10	Diagram batang rata-rata ekspresi mRNA vimentin.....	53
Gambar 11	Gambaran <i>band</i> ekspresi mRNA SOD1 dan GAPDH	54
Gambar 12	Diagram batang rata-rata ekspresi mRNA SOD1	55

DAFTAR LAMPIRAN

Lampiran 1	Surat Keterangan Kelayakan Etik	87
Lampiran 2	Hasil Uji Normalitas <i>Shapiro-Wilk</i>	88
Lampiran 3	Hasil Uji <i>Post Transformasi Data</i>	92
Lampiran 4	Hasil Uji <i>Kruskal-Wallis</i> dan <i>Post Hoc Mann-Whitney</i>	93
Lampiran 5	Hasil Uji <i>One-Way ANOVA</i> dan <i>Post Hoc LSD</i>	101

DAFTAR SINGKATAN

ACE	: <i>Angiotensin-converting Enzyme</i>
Cdna	: <i>complementary Deoxyribo Nucleic Acid</i>
CGA	: <i>Chlorogenic Acid</i>
CQA	: <i>Caffeoylquinic Acid</i>
CYP2E1	: <i>Cytochrome P450E1</i>
DEPC	: <i>Diethylpyrocarbonate</i>
DM	: <i>Diabetes Mellitus</i>
dNTP	: <i>Deoxyribonucleotide Triphosphate</i>
EDTA	: <i>Ethylene Diamine Tetraacetic Acid</i>
EGF	: <i>Epidermal Growth Factor</i>
EMT	: <i>Epithelial to Mesenchymal Transition</i>
ESRD	: <i>End Stage Renal Disease</i>
E-Cadherin	: <i>Epithelial Cadherin</i>
eGFR	: <i>Estimated Glomerular Filtration Rate</i>
FGF-2	: <i>Fibroblast Growth Factor-2</i>
FSP1	: <i>Fibroblast Specific Protein-1</i>
FQA	: <i>Feruloylquinic Acid</i>
GAPDH	: <i>Glyceraldehyde-3-Phosphate Dehydrogenase</i>
GFR	: <i>Glomerular Filtration Rate</i>
GGK	: <i>Gagal Ginjal Kronik</i>
HIF	: <i>Hypoxia Inducible Factor</i>
HO-1	: <i>Heme Oxygenase1</i>
IRR	: <i>Indonesian Renal Registry</i>
LAP	: <i>Latency Associated Protein</i>
LTBP	: <i>Latent TGF-β Binding Protein</i>
MAPK	: <i>Mitogen Activated Protein Kinase</i>
MMP2	: <i>Matrix Metalloproteinase-2</i>
mRNA	: <i>messenger Ribonucleic Acid</i>
Mrp1	: <i>Multidrug resistance protein 1</i>
Mrp2	: <i>Multidrug resistance protein 1</i>
NADPH	: <i>Nicotinamide Adenine Dinucleotide Phosphate</i>
NBF	: <i>Normal Buffer Formaline</i>
NF- κ B	: <i>Nuclear factor KappaB</i>
PAS	: <i>Periodic Acid Schiff</i>
PBS	: <i>Phosphate Buffer Saline</i>
PCR	: <i>Polymerase Chain Reaction</i>
p-CQA	: <i>pcouma-Roylquinic Acid</i>
PDGF- β	: <i>Platelet-derived growth factor subunit B</i>
Perhimpri	: <i>Perhimpunan Nefrologi Indonesia</i>
RAAS	: <i>Renin Angiotensin Aldosteron System</i>
RNA	: <i>Ribonucleic Acid</i>
ROS	: <i>Reactive Oxygen Species</i>
RPM	: <i>Rate per Minute</i>

RT-PCR	: <i>Reverse Transcription Polymerase Chain Reaction</i>
Smad	: <i>Small worm phenotype-mothers against decapentaplegic</i>
SOD1	: <i>Superoxide Dismutase 1</i>
TBE	: <i>Tris-Borate Ethylene Diamine Tetraacetic Acid</i>
TGF- β	: <i>Transforming Growth Factor Beta</i>
TLR-4	: <i>Toll-like Receptor-4</i>
TNF α	: <i>Tumor Necrosis Factor Alpha</i>
UUO	: <i>Unilateral Ureteral Obstruction</i>
4-HNE	: <i>4-hydroxynoneal</i>
α SMA	: <i>α Smooth Muscle Actin</i>