

List of abbreviations and acronyms

53BP1 p53-binding protein 1

AKT protein kinase B

ANT2 adenine nucleotide translocase-2

ATM ataxia telangiectasia

ATR ataxia telangiectasia and Rad3 related

Bak BCL2 antagonist/killer

Bax BCL2 associated X, apoptosis regulator

BCL-2 B-cell CLL/Lymphoma 2

BJ human dermal fibroblast

BrdU 5-bromo-2'-deoxyuridine

C/EBP β CCAAT/enhancer binding protein beta

CCN1 CCN family member 1

Cdk(s) cyclin-dependent kinase(s)

Cdki(s) cyclin-dependent kinase inhibitor(s)

CDKN2A cyclin-dependent kinase Inhibitor 2A

CDT(s) cytolethal distending toxin(s)

CIP/KIP Cdk interacting protein/ Kinase inhibitory protein

CTP cytidine triphosphate

CXCR-2 C-X-C motif chemokine receptor 2

CYR61 cysteine-rich angiogenic inducer 61

DDR DNA damage response

DNA-SCARS DNA segments with chromatin alterations reinforcing senescence

DNMT3A DNA (cytosine-5)-methyltransferase 3A

DSB(s) double-strand breaks

ECM extracellular matrix

ERK extracellular signal-regulated kinases

ERVWE1 endogenous retrovirus group W member 1, envelope

FAS fas cell surface death receptor

FIS fusion-induced senescence

FOXO4 forkhead box O4

GSK3 glycogen synthase kinase 3

H3K9me3 histone 3 lysine 9 trimethylation

HMGB2 high mobility group box 2

HP1 γ heterochromatin protein 1 homologue- γ

HSP90 heat shock protein 90

hTERT human telomerase reverse transcriptase

IFN- γ interferon γ

IGF1 insulin like growth factor 1

IL-1 α interleukin 1 α

IL-1 β interleukin 1 β

IL-6 interleukin 6

IL-8 interleukin 8

INK4 inhibitors of cdk4

INK-ATTAC INK-linked apoptosis through targeted activation of caspase

MDM2 murine double minute 2

MEF mouse embryonic fibroblast

MEK MAP-ERK kinase

MGSA/GRO melanoma growth stimulatory activity/growth regulated protein

MICA MHC class I polypeptide-related sequence A

MMP(s) metalloproteinase(s)

mTOR mammalian target of rapamycin mutated

NF- κ B nuclear factor kappa B

NK natural killer

NKG2D natural killer group 2D

Nox4 NADPH oxidase 4

Nrf2 nuclear factor erythroid-derived 2-related factor 2

OIS oncogene-induced senescence

p14ARF cyclin-dependent kinase inhibitor 2A alternate reading frame

p16 cyclin-dependent kinase inhibitor 2A

p21 cyclin-dependent kinase inhibitor 1A

p38MAPK p38 mitogen- activated protein kinase

p53 tumor protein p53

PDL1 programmed cell death ligand 1

pRB retinoblastoma protein

RAF rapidly accelerated fibrosarcoma

RAS retrovirus-associated DNA sequences

ROS reactive oxygen species

SAHF senescence-associated heterochromatin foci

SA- β -gal senescence-associated β -galactosidase

SIPS stress- induced premature senescence

SSB(s) single-strand breaks

TGF- β transforming growth factor- β

T_H1 T helper-1

TIMP-1 tissue inhibitor of metalloproteinases-1

TNF- α tumour necrosis factor α

TRF1 telomeric repeat-binding factor 1

TRF2 telomeric repeat-binding factor 2

ULBP UL16 binding protein

VSMC vein smooth muscle cell

WNT16 Wnt family member 16

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