RUGDOG

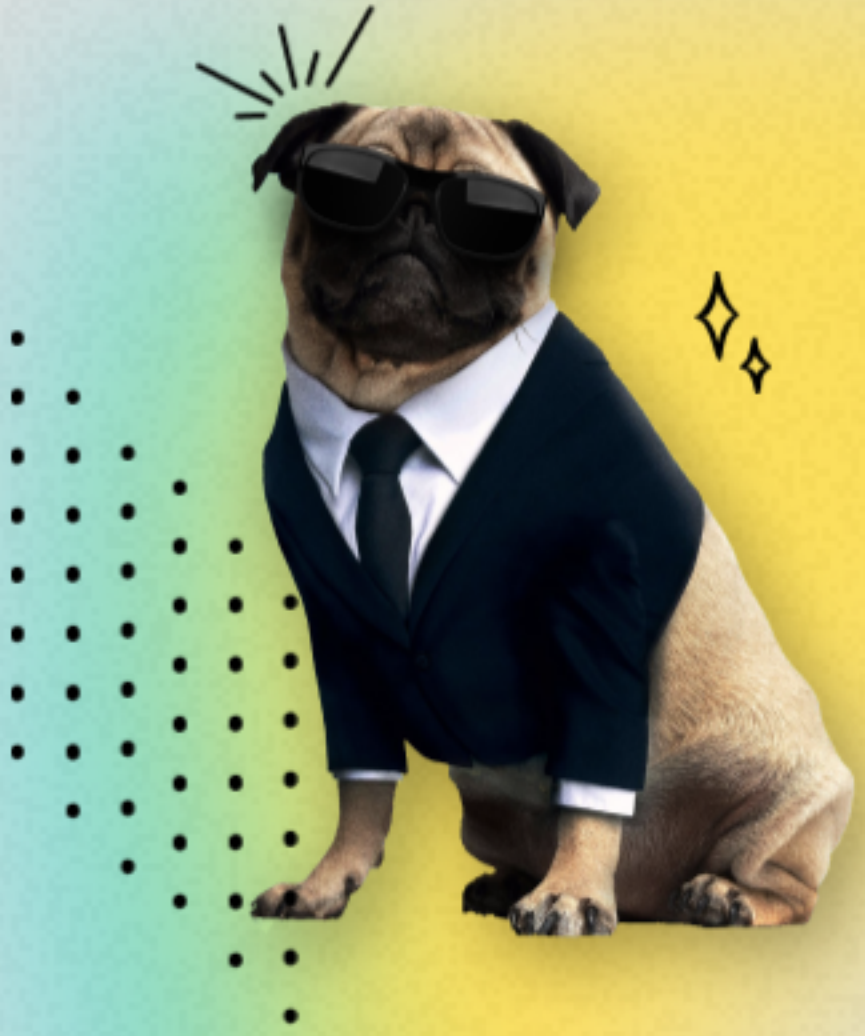
# SMART CONTRACT SECURITY AUDIT

Final report

Plan: Simple

## REIGN OF TERROR

June 2022



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# CONTENTS

# INTRODUCTION

A fungible token of ERC20 standard with antibot functionality.

| | |
|---|---|
| Name | REIGN OF TERROR |
| Audit date | 2022-06-23 - 2022-06-23 |
| Language | Solidity |
| Network | Binance Smart Chain |

# CONTRACTS CHECKED

| Name | Address |
|---|---|
| AntiBotStandardToken | 0x388060ed4f9fa01b59ec2cc1748188ac2e731e47 |

# AUDIT PROCESS

The code was audited by the team according to the following order:

Automated analysis

- Scanning the project's smart contracts with several publicly available automated Solidity analysis tools
- Manual confirmation of all the issues found by the tools

Manual audit

- Thorough manual analysis of smart contracts for security vulnerabilities
- Smart contracts' logic check

## ATTACKS CHECKED

| Title | Check result |
|---|---|
| Unencrypted Private Data On-Chain | ✓ passed |
| Code With No Effects | ✓ passed |
| Message call with hardcoded gas amount | ✓ passed |
| Typographical Error | ✓ passed |
| DoS With Block Gas Limit | ✓ passed |
| Presence of unused variables | ✓ passed |
| Incorrect Inheritance Order | ✓ passed |
| Requirement Violation | ✓ passed |
| Weak Sources of Randomness from Chain Attributes | ✓ passed |
| Shadowing State Variables | ✓ passed |
| Incorrect Constructor Name | ✓ passed |
| Block values as a proxy for time | ✓ passed |
| Authorization through tx.origin | ✓ passed |
| DoS with Failed Call | ✓ passed |
| Delegatecall to Untrusted Callee | ✓ passed |

| | |
|---|---|
| Use of Deprecated Solidity Functions | ✓ passed |
| Assert Violation | ✓ passed |
| State Variable Default Visibility | ✓ passed |
| Reentrancy | ✓ passed |
| Unprotected SELFDESTRUCT Instruction | ✓ passed |
| Unprotected Ether Withdrawal | ✓ passed |
| Unchecked Call Return Value | ✓ passed |
| Floating Pragma | ✓ passed |
| Outdated Compiler Version | ✓ passed |
| Integer Overflow and Underflow | ✓ passed |
| Function Default Visibility | ✓ passed |

## CLASSIFICATION OF ISSUES

| | |
|---|---|
| **High severity** | Issues leading to assets theft, locking or any other loss of assets or leading to contract malfunctioning. |
| **Medium severity** | Issues that can trigger a contract failure of malfunctioning. |
| **Low severity** | Issues that do now affect contract functionality. For example, unoptimised gas usage, outdated or unused code, code styleviolations, etc. |

# ISSUES

## High severity issues

**No issues were found**

## Medium severity issues

**No issues were found**

## Low severity issues

### 1. Antibot may block transfers (AntiBotStandardToken)

The contract calls an external contract for antibot protection. The antibot contract is deployed via proxy and it's coe can be changed. The antibot may potentially block transfers.

```
function _transfer(
    address sender,
    address recipient,
    uint256 amount
) internal virtual {
    ...

    if (enableAntiBot) {
        pinkAntiBot.onPreTransferCheck(sender, recipient, amount);
    }
    ...
}
```

# CONCLUSION

REIGN OF TERROR AntiBotStandardToken contract was audited. 1 low severity issue was found.

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This report should not be used in any way to make decisions around investment or involvement with any particular project. This report in no way provides investment advice, nor should be leveraged as investment advice of any sort. This report represents an extensive assessing process intending to help our customers increase the quality of their code while reducing the high level of risk presented by cryptographic tokens and blockchain technology.

# STATIC ANALYSIS

```
INFO:Detectors:
AntiBotStandardToken.allowance(address,address).owner (REIGN OF TERROR.sol#590)
shadows:
  - Ownable.owner() (REIGN OF TERROR.sol#150-152) (function)
AntiBotStandardToken._approve(address,address,uint256).owner (REIGN OF
TERROR.sol#795) shadows:
  - Ownable.owner() (REIGN OF TERROR.sol#150-152) (function)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#local-
variable-shadowing
INFO:Detectors:
AntiBotStandardToken.constructor(string,string,uint8,uint256,address,address,uint256)
.serviceFeeReceiver_ (REIGN OF TERROR.sol#491) lacks a zero-check on :
    - address(serviceFeeReceiver_).transfer(serviceFee_) (REIGN OF TERROR.sol#510)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#missing-
zero-address-validation
INFO:Detectors:
Reentrancy in AntiBotStandardToken._transfer(address,address,uint256) (REIGN OF
TERROR.sol#716-736):
  External calls:
  - pinkAntiBot.onPreTransferCheck(sender,recipient,amount) (REIGN OF
TERROR.sol#725)
  State variables written after the call(s):
  - _balances[sender] = _balances[sender].sub(amount,ERC20: transfer amount exceeds
balance) (REIGN OF TERROR.sol#730-733)
  - _balances[recipient] = _balances[recipient].add(amount) (REIGN OF
TERROR.sol#734)
Reentrancy in AntiBotStandardToken.constructor(string,string,uint8,uint256,address,ad
dress,uint256) (REIGN OF TERROR.sol#485-511):
  External calls:
  - pinkAntiBot.setTokenOwner(owner()) (REIGN OF TERROR.sol#500)
  State variables written after the call(s):
  - enableAntiBot = true (REIGN OF TERROR.sol#501)
Reentrancy in AntiBotStandardToken.transferFrom(address,address,uint256) (REIGN OF
TERROR.sol#630-645):
```

```
  External calls:
  - _transfer(sender,recipient,amount) (REIGN OF TERROR.sol#635)
    - pinkAntiBot.onPreTransferCheck(sender,recipient,amount) (REIGN OF
TERROR.sol#725)
  State variables written after the call(s):
  - _approve(sender,_msgSender(),_allowances[sender][_msgSender()].sub(amount,ERC20:
transfer amount exceeds allowance)) (REIGN OF TERROR.sol#636-643)
    - _allowances[owner][spender] = amount (REIGN OF TERROR.sol#802)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-
vulnerabilities-2
INFO:Detectors:
Reentrancy in AntiBotStandardToken._transfer(address,address,uint256) (REIGN OF
TERROR.sol#716-736):
  External calls:
  - pinkAntiBot.onPreTransferCheck(sender,recipient,amount) (REIGN OF
TERROR.sol#725)
  Event emitted after the call(s):
  - Transfer(sender,recipient,amount) (REIGN OF TERROR.sol#735)
Reentrancy in AntiBotStandardToken.constructor(string,string,uint8,uint256,address,ad
dress,uint256) (REIGN OF TERROR.sol#485-511):
  External calls:
  - pinkAntiBot.setTokenOwner(owner()) (REIGN OF TERROR.sol#500)
  Event emitted after the call(s):
  - TokenCreated(owner(),address(this),TokenType.antiBotStandard,VERSION) (REIGN OF
TERROR.sol#503-508)
Reentrancy in AntiBotStandardToken.transferFrom(address,address,uint256) (REIGN OF
TERROR.sol#630-645):
  External calls:
  - _transfer(sender,recipient,amount) (REIGN OF TERROR.sol#635)
    - pinkAntiBot.onPreTransferCheck(sender,recipient,amount) (REIGN OF
TERROR.sol#725)
  Event emitted after the call(s):
  - Approval(owner,spender,amount) (REIGN OF TERROR.sol#803)
    - _approve(sender,_msgSender(),_allowances[sender]
[_msgSender()].sub(amount,ERC20: transfer amount exceeds allowance)) (REIGN OF
TERROR.sol#636-643)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-
vulnerabilities-3
```

```
INFO:Detectors:
AntiBotStandardToken._burn(address,uint256) (REIGN OF TERROR.sol#768-779) is never
used and should be removed
AntiBotStandardToken._setupDecimals(uint8) (REIGN OF TERROR.sol#813-815) is never
used and should be removed
Context._msgData() (REIGN OF TERROR.sol#110-112) is never used and should be removed
SafeMath.div(uint256,uint256) (REIGN OF TERROR.sol#324-326) is never used and should
be removed
SafeMath.div(uint256,uint256,string) (REIGN OF TERROR.sol#380-389) is never used and
should be removed
SafeMath.mod(uint256,uint256) (REIGN OF TERROR.sol#340-342) is never used and should
be removed
SafeMath.mod(uint256,uint256,string) (REIGN OF TERROR.sol#406-415) is never used and
should be removed
SafeMath.mul(uint256,uint256) (REIGN OF TERROR.sol#310-312) is never used and should
be removed
SafeMath.sub(uint256,uint256) (REIGN OF TERROR.sol#296-298) is never used and should
be removed
SafeMath.tryAdd(uint256,uint256) (REIGN OF TERROR.sol#211-217) is never used and
should be removed
SafeMath.tryDiv(uint256,uint256) (REIGN OF TERROR.sol#253-258) is never used and
should be removed
SafeMath.tryMod(uint256,uint256) (REIGN OF TERROR.sol#265-270) is never used and
should be removed
SafeMath.tryMul(uint256,uint256) (REIGN OF TERROR.sol#236-246) is never used and
should be removed
SafeMath.trySub(uint256,uint256) (REIGN OF TERROR.sol#224-229) is never used and
should be removed
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code
INFO:Detectors:
Pragma version=0.8.4 (REIGN OF TERROR.sol#461) necessitates a version too recent to
be trusted. Consider deploying with 0.6.12/0.7.6
solc-0.8.4 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-
versions-of-solidity
INFO:Detectors:
Parameter AntiBotStandardToken.setEnableAntiBot(bool)._enable (REIGN OF
```

```
TERROR.sol#513) is not in mixedCase
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions
INFO:Detectors:
Variable AntiBotStandardToken._totalSupply (REIGN OF TERROR.sol#480) is too similar to AntiBotStandardToken.constructor(string,string,uint8,uint256,address,address,uint256).totalSupply_ (REIGN OF TERROR.sol#489)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-are-too-similar
INFO:Detectors:
renounceOwnership() should be declared external:
  - Ownable.renounceOwnership() (REIGN OF TERROR.sol#169-171)
transferOwnership(address) should be declared external:
  - Ownable.transferOwnership(address) (REIGN OF TERROR.sol#177-180)
name() should be declared external:
  - AntiBotStandardToken.name() (REIGN OF TERROR.sol#520-522)
symbol() should be declared external:
  - AntiBotStandardToken.symbol() (REIGN OF TERROR.sol#528-530)
decimals() should be declared external:
  - AntiBotStandardToken.decimals() (REIGN OF TERROR.sol#545-547)
totalSupply() should be declared external:
  - AntiBotStandardToken.totalSupply() (REIGN OF TERROR.sol#552-554)
balanceOf(address) should be declared external:
  - AntiBotStandardToken.balanceOf(address) (REIGN OF TERROR.sol#559-567)
transfer(address,uint256) should be declared external:
  - AntiBotStandardToken.transfer(address,uint256) (REIGN OF TERROR.sol#577-585)
allowance(address,address) should be declared external:
  - AntiBotStandardToken.allowance(address,address) (REIGN OF TERROR.sol#590-598)
approve(address,uint256) should be declared external:
  - AntiBotStandardToken.approve(address,uint256) (REIGN OF TERROR.sol#607-615)
transferFrom(address,address,uint256) should be declared external:
  - AntiBotStandardToken.transferFrom(address,address,uint256) (REIGN OF TERROR.sol#630-645)
increaseAllowance(address,uint256) should be declared external:
  - AntiBotStandardToken.increaseAllowance(address,uint256) (REIGN OF TERROR.sol#659-670)
decreaseAllowance(address,uint256) should be declared external:
```

```
  - AntiBotStandardToken.decreaseAllowance(address,uint256) (REIGN OF
TERROR.sol#686-700)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#public-
function-that-could-be-declared-external
INFO:Slither:REIGN OF TERROR.sol analyzed (7 contracts with 75 detectors), 40
result(s) found
INFO:Slither:Use https://crytic.io/ to get access to additional detectors and Github
integration
  REIGN OF TERROR
```

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# WOOF!

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