BIOTnA Biotech
BIOSCIENCE FOR THE LAB.

# TUNEL Apoptosis Assay Kit (FAM)

**Product name: TUNEL Apoptosis Assay Kit (FAM)**
**Catalog No.: TAAP01F**

**Introduction:**

The kit can detect fragmented DNA in the nucleus during apoptosis. In this modified TUNEL assay kit, Digoxigenin-nucleotide is labeled at the DNA 3´-OH ends using the natural or recombinant terminal deoxynucleotidyl transferase (TdT or rTdT). The mouse anti- DIG bind to these Digoxigenin nucleotides, which are detected by following the anti-Mouse IgG (H+L)-FAM. The nuclei of apoptotic cells should be observed green color under fluorescence microscope.

**Form:**

| Catalog No. | Size |
|---|---|
| TAAP01F-20 | 20 reactions |
| TAAP01F-50 | 50 reactions |
| TAAP01F-100 | 100 reactions |

**Kit Contents:**

| Kit Contents | Format | Recommend time | Storage |
|---|---|---|---|
| Proteinase K | Ready to Use | 10-30 minutes. | 4℃ |
| Permeabilization buffer | Ready to Use | 10-30 minutes. | 4℃ |
| TdT Reaction Buffer | Ready to Use | 10 minutes. | 4℃ |
| TdT Enzyme Reagent | Concentrate | Diluted in TdT Label Reagent | -20℃ |
| TdT Label Reagent | Ready to Use | 60-120 minutes. | -20℃ |
| Background reducing buffer | Ready to Use | 30 minutes. | 4℃ |
| anti- DIG | Ready to Use | 60 minutes. | 4℃ |
| anti-mouse IgG (H+L)-FAM(488) | Ready to Use | 30 minutes. | 4℃ |
| DAPI solution | Ready to Use | 1-2 minutes. | 4℃ |
| Aqua mounting medium | Ready to Use | --- | 25-28℃ |

**Staining Protocol Recommendations:**

1. Deparaffinize and rehydrate formalin-fixed paraffin-embedded tissue section.
2. Pretreatment: add 50ul proteinase K to digest sample and incubated for 10 minutes.
3. Wash in PBS buffer for 2 min.
4. Apply enough Permeabilization buffer to cover the tissue and incubated for 30 minutes at room temperature.
5. Wash in PBS buffer for 2 min(3 times).
6. Apply 50ul Background reducing buffer and incubate for 30 minutes at room temperature to block non-specific background staining. (It is necessary for mice tissue and others with non-specific background.)
7. Wash in PBS buffer for 2 min(3 times).
8. Pre-incubation: incubate sections in TdT Reaction Buffer for 10 minutes.
9. Throw the TdT Reaction Buffer away from the tissue and Do Not wash.
10. TdT Reaction: incubate sections in TdT Reaction Mixture for 1 hours at 37°C in humidified chamber. (Working buffer: TdT Enzyme Reagent 5ul add TdT Label Reagent 45ul).
11. Wash in PBS buffer for 2 min(3 times).
12. Apply 50ul anti- DIG and incubate for 1 hours at 37°C in humidified chamber. Wash 3 times in PBS buffer.
13. Apply 50ul anti-mouse IgG (H+L)- FAM(488) and incubate for 30 minutes at room temperature. Wash 3 times in PBS buffer.
14. Counterstaining in DAPI for 1-2 mintues.
15. Rinse in running tap water for 5 minutes.
16. Cover slip with aqua mounting medium.

**Storage and Stability:**

Please read the kit contents and follow the storage condition. The user must validate any other storage conditions. When properly stored, the reagent is stable until the date indicated on the label. Do not use the reagent beyond the expiration date. If unexpected results are observed which cannot be explained by variations in laboratory procedures and a problem with the reagent is suspected, contact Technical: info@biotna.net