**Anti- human ERCC1 Mouse Monoclonal Primary Antibody**

Clone: 4F9

**CATALOG NUMBER**

C0005MA01-MA 0.1 mL  
C0005MA05-MA 0.5 mL  
C0005MA10-MA 1.0 mL

**ENGLISH**

**Intended use**  
Anti- human ERCC1 (Clone: 4F9) Mouse Monoclonal Primary Antibody is intended for detection of ERCC1 protein expression in frozen or formalin fixed human tissues and cells. The clinical interpretation of any positive staining or its absence should be complemented by morphological and histological studies with proper controls. Evaluations should be made within the context of the patient's clinical history and other diagnostic tests by a qualified pathologist. The antibody is intended for in vitro diagnostic (IVD) use.

**Background**  
The product of this gene functions in the nucleotide excision repair pathway, and is required for the repair of DNA lesions such as those induced by UV light or formed by electrophilic compounds including cisplatin. The encoded protein forms a heterodimer with the XPF endonuclease (also known as ERCC4), and the heterodimeric endonuclease catalyzes the 5' incision in the process of excising the DNA lesion. The heterodimeric endonuclease is also involved in recombinational DNA repair and in the repair of inter-strand crosslinks. Mutations in this gene result in cerebrooculofacioskeletal syndrome, and polymorphisms that alter expression of this gene may play a role in carcinogenesis. Multiple transcript variants encoding different isoforms have been found for this gene. The last exon of this gene overlaps with the CD3e molecule, epsilon associated protein gene on the opposite strand. [provided by RefSeq, Oct 2009]

Alternative names: UV20; COFS4; RAD10

**Reagent provided**  
Anti-human ERCC1 Mouse Monoclonal Primary Antibody (Clone: 4F9) is provided in liquid form in 20mM Sodium phosphate, 150mM Sodium chloride, 0.2% BSA, 0.09% Sodium azide, pH 7.4. The isotype of the antibody is IgG1,k. The protein concentration is approximately 1.0 +/- 0.05 mg/mL.

For immunohistochemistry, the primary antibody may be used at a working dilution of 1:100 – 1:200 for formalin-fixed, paraffin-embedded human tissue. It can be dependent upon the detection system used. These are guidelines only, and optimal dilutions should be determined by the individual laboratory.

**Immunogen**  
Protein expressed in 293T cell transfected with human ERCC1 expression vector.
Specificity
The specificity of the anti-human ERCC1 Mouse Monoclonal Primary Antibody was established on human normal adjacent lung and endometrial carcinoma tissues. All tissues express ERCC1. Human normal adjacent lung and endometrial carcinoma showed positive staining using immunohistochemical (IHC) test methods.

Materials Required but Not Supplied
Antibody diluent, HIER solution, Antibody detection kits, Chromogen, Staining reagents, negative and positive tissue control slides are not included.

Precautions
1. For use by trained professionals only.
2. This product contains sodium azide (NaN₃), a chemical highly toxic in pure form. At product concentrations, though not classified as hazardous, NaN₃ may react with lead and copper plumbing to form highly explosive build-ups of metal azides. Upon disposal, flush with large volumes of water to prevent metal azide build-up in plumbing.
3. Wear appropriate Personal Protective Equipment to avoid contact with eyes and skin.
4. Unused reagents should be disposed of according to local, State, and Federal regulations.

Storage
Store at 2-8°C. Do not use the product past the expiration date indicated on the label. If reagents are stored under any other conditions, the end user must verify the acceptability of those conditions. There are no obvious signs to indicate instability of this product therefore, positive and negative controls should be run simultaneously with patient specimens.

Specimen Preparation
Paraffin Sections
Anti-human ERCC1 Mouse Monoclonal Primary Antibody can be used on formalin-fixed, paraffin-embedded tissue sections at a working dilution of 1:100 to 1:200. Anti-human ERCC1 Mouse Monoclonal Primary Antibody (Clone: 4F9) working dilution requires pretreatment with heat induced epitope retrieval (HIER) for 3 minutes using pressure chamber at 110°C to achieve optimal staining. We recommend using HIER Accel 3 in 1 EDTA solution pH 8.7, which showed optimal staining at a dilution of 1:200 on human normal adjacent lung and endometrial carcinoma.

The dilutions are estimates; the actual staining results may vary due to reagents and detection protocols used. Validation of antibody performance and final protocol are the responsibility of the end user.

Staining procedure
Manual Staining Procedure
1. Deparaffinize slides.
2. Submerge slides in peroxidase quenching solution for ~10 minutes, then rinse 2x with dH₂O.
3. Heat Induced Epitope Retrieval is required for this antibody; Accel 3 in 1 EDTA solution, pH 8.7 at 110°C for 3 minutes.
4. Allow slides to cool down from step 3, rinse with distilled water, wash with PBS-T 3 times, 2 minutes each.
5. Apply serum blocking solution.[Optional]
6. Apply primary antibody and incubate for 30-60 minutes at room temperature. After incubation wash with PBS-T 3 times, 2 minutes each.
7. Apply secondary antibody and incubate according to data sheet of the detection system. Wash with PBS-T 3 times, 2 minutes each.
8. Apply enzyme conjugate and incubate according to data sheet of detection system. Wash with PBS-T 3 times, 2 minutes each.
9. Apply chromogen and incubate 5-10 minutes and rinse with distilled water.

Staining interpretation
The cellular staining pattern for Anti-human ERCC1 Mouse Monoclonal Primary Antibody is nuclear.

Performance Characteristics
Predicted Negative Staining in Normal Tissue/Cells
No tissue available – all tissues express ERCC1.

Predictive Staining in Tumor
Anti-human ERCC1 Mouse Monoclonal (Clone: 4F9) produced nuclear staining when screened on human normal adjacent lung and endometrial carcinoma.
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