

**Product No. D-1286**  
**Lot 105H4842**

**Monoclonal Anti-Desmosomal Protein**  
Mouse Ascites Fluid  
Clone ZK-31

Monoclonal Anti-Desmosomal Protein (mouse IgG1 isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Human epidermal keratins were used as the immunogen. The isotype is determined using Sigma ImmunoType<sup>™</sup> Kit (Sigma Stock No. ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma Stock No. ISO-2). The product is provided as ascites fluid with 0.1% sodium azide (see MSDS)\* as a preservative.

### **Specificity**

Monoclonal Anti-Desmosomal Protein is immunospecific for an epitope on desmosomes as determined the indirect immunofluorescent staining of frozen sections of human and animal tissues. This antibody displays the typically punctate dot-like pattern consistent with desmosome decoration. The product does not stain hemidesmosomes. Monoclonal Anti-Desmosomal Protein shows positive staining with human mamilla (epidermis and ducts), tonsil, cervix and kidney, bovine muzzle and salivary glands, mouse liver (hepatocytes and bile duct epithelia) and snout, rabbit tongue, rat tongue, lip and heart. The antibody localizes desmosomes on MCF7, BMGE, and PtK2 monolayers grown in tissue culture. Weak reactions are observed with SDS-denatured and reduced desmosomal protein preparations by immunoblotting. Fixation with formalin seems to destroy the epitope recognized by this antibody.

### **Working Dilution**

A working dilution of 1:400 was determined by indirect immunofluorescent staining of frozen sections of human tissue.

In order to obtain optimum results, it is recommended that each individual user determine working dilutions by titration assay.

### **Description**

Several types of cell to cell interconnections or junctions are known and have been morphologically characterized, tight junctions, desmosomes, adhesion plaques and gap junctions. Desmosomes (zonulae adherence, adherence junctions) are thickened regions of the plasma membrane where cells are tightly attached to their neighbors. Hemidesmosomes are similar structures found in regions of epithelial cells in contact with the basal lamina. Desmosomes and hemidesmosomes are specifically associated with intermediate sized filaments of the cytokeratin type. The histological determination of tissue type has been facilitated in recent years by immunological techniques which use specific antibodies directed against various tissue markers such as intermediate filament proteins. Monoclonal Anti-Desmosomal Protein shows no staining of cytoplasmic filaments but localizes structure of cell-cell boundaries not stained by anti-cytokeratin antibodies.

### **Uses**

Monoclonal Anti-Desmosomal Protein may be used for immunoperoxidase or immunofluorescent staining of frozen sections of human and animal tissues or densely grown monolayers of human and animal cells where it stains the cell-cell boundaries. It may aid in the differentiation of tumors of epithelial and other origin and especially for tumors which show poor morphological differentiation.

### **Storage**

For continuous use, store 2-8°C. For extended storage, solution may be frozen in working aliquots. Repeated freezing and thawing is **not** recommended. If slight turbidity occurs upon prolonged storage, clarify by centrifugation before use.

\*Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Sigma warrants that its products conform to the information contained in this and other Sigma publications. Purchaser must determine the suitability of the products for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale. Issued 11/95.