**BACKGROUND**

Desmogleins are type I membrane proteins that are important for cell adhesion and are expressed in great abundance at the desmosomes, which are adhesive cell junctions. Desmogleins belong to the cadherin family and consist of dsg1, dsg2, dsg3, and dsg4. The desmosomal cadherins desmocolins DSC1 and DSC3 are also type I membrane proteins that may contribute to epidermal cell positioning by mediating differential adhesiveness between cells that express different isoforms. Alternative splicing gives rise to isoforms A and B of DSC1 and DSC3, which differ in their C-termini. DSC2 exhibits homophilic interactions in solution, and forms heterophilic interactions with dsg2. DSC2 and DSC1 are present at high levels in the suprabasal skin layers. Dsc2 protein is predominantly localized to specialized adhesion junctions between the cortex and the medulla. DSC3 is expressed in all epidermal layers as well as in glandular ducts and in basal matrix cells and the outer root sheath of hair follicles. DSC3, but not DSC1, is also present in desmosomes of the basal and suprabasal cell layers of other stratified epithelia such as cervix, tongue, and esophagus as well as in the basal layer of bladder urothelium and the complex epithelium of trachea.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: DSC2/DSC3 (human) mapping to 18q12.1; Dsc2/Dsc3 (mouse) mapping to 18 A2.

**SOURCE**

DSC2/3 (7G6) is a mouse monoclonal antibody raised against the extracellular domain of DSC2 of human origin.