Active Ingredient Summary Table

Scar

Active Pharmaceutical Ingredient	Class	Activity on Scar Tissue
Aloe Vera 200:1 Freeze Dried Powder	Anti-inflammatory; Moisturizer; Curative agent	Contains anti-inflammatory fatty acids, cholesterol, campersterol and B-sitosterol.
Alpha Lipoic Acid	Antioxidant; Anti-inflammatory	Reduces inflammation
Ascorbic Acid	Vitamin C; Antioxidant	Reduces redness
Benzocaine	Anesthetic	Decreases pain and itching
Betamethasone Betamethasone Valerate	Corticosteroids; Anti-inflammatory	Inhibition of ECM inflammatory protein; diminishes pruritus and pain; decreases alpha2 macroglobulin levels to inhibit fibroblast production. Not recommended for older scars or freshly closed wounds.
Bupivacaine Hydrochloride	Anesthetic	Decreases pain and itching
Caffeine	Antioxidant; Anti-inflammatory	phosphodiesterase inhibitor
Collagenase	Proteolytic enzyme; Scar degradation	Breaks the peptide bonds in collagen.
Dimethyl Sulfone	Antioxidant; Anti-inflammatory	Reduces redness
Diphenhydramine Hydrochloride	Histamine H1 blocker; antiinflammatory; Antiproliferative	Controls pruritus and pain; inhibits collagen synthesis by suppressing the release of TGF-b1 from fibroblasts.
EGCg	Polyphenol from green tea; Antiinflammatory; Antiproliferative	Inhibits type I collagen production possibly by interfering with the STAT3-signaling pathway

Active Ingredient Summary Table

Scar

Fluticasone Propionate	Corticosteroids; Anti-inflammatory	Inhibition of ECM inflammatory protein; diminishes pruritus and pain; decreases alpha2 macroglobulin levels to inhibit fibroblast production. Not recommended for older scars or freshly closed wounds.
Gabapentin	Interacts with voltage-sensitive calcium channels; Antipuritic	Impedes the transmission of nociceptive sensations, thus suppressing pruritus
Hydrocortisone **Hydrocortisone Acetate**	Corticosteroids; Anti-inflammatory	Inhibition of ECM inflammatory protein; diminishes pruritus and pain; decreases alpha2 macroglobulin levels to inhibit fibroblast production. Not recommended for older scars or freshly closed wounds.
Imiquimod	Imidazolaquinolines; Immunomodulators; Antifibrotic	Induce the production of cytokines including interferon-alpha (IFN-a), a dose-dependent, antifibrotic cytokine. Not recommended for freshly closed wounds.
Levocetirizine Dihydrochloride	Histamine H1 blocker; Antiinflammatory; Antiproliferative agents	Controls pruritus and pain; inhibits collagen synthesis by suppressing the release of TGF-b1 from fibroblasts.
Lidocaine	Anesthetic	Decreases pain and itching
Loratadine	Histamine H1 blocker; Antiinflammatory; Antiproliferative agents	Controls pruritus and pain; inhibits collagen synthesis by suppressing the release of TGF-b1 from fibroblasts.
Nifedipine	Calcium Channel blocker; Scar degradation	Decreases ECM collagen production; induces collagenase synthesis; For treatment of older, non-inflamed scars
Pentoxifylline	Circulatory agent; Antiproliferative; anti-inflammatory	Inhibits collagen synthesis in dermal fibroblasts; phosphodiesterase inhibitor
Prilocaine Hydrochloride	Anesthetic	Decreases pain and itching

Active Ingredient Summary Table

Scar

Quercetin	Flavonoid; antioxidant; antihistamine: Antiproliferative	Inhibits the expression of TGF b1 and 2 in keloid fibroblasts
Tamoxifen Citrate	Protein kinase C (PKC) inhibitor; scar degradation	For treatment of older, non-inflamed scars
Tranilast	Mast cell stabilizer; Antiproliferative	Inhibits the expression TGH b, interleukin-1 b, and prostaglandin E2: suppresses collagen synthesis in keloid fibroblasts
Tretinoin	Vitamin A derivative; Antiproliferative	Inhibits TGF-b1-induced type I collagen expression in keloid fibroblasts
Triamcinolone **Triamcinolone Acetonide**	Corticosteroids; Anti-inflammatory	Inhibition of ECM inflammatory protein; diminishes pruritus and pain; decreases alpha2 macroglobulin levels to inhibit fibroblast production. Not recommended for older scars or freshly closed wounds.
Verapamil Hydrochloride	Calcium Channel blocker; Scar degradation	Decreases ECM collagen production; induces collagenase synthesis; For treatment of older, non-inflamed scars

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