

Supplemental Table S1. Proteins evaluated during Western Immunoblotting

Protein Studied	Physiological Purpose
Involucrin	Two molecular weights evaluated 68 and 140 kDa. The 68 kDa is a precursor protein for keratinocyte cornified envelope which is formed beneath the inner cell membrane surface in cytosol ultimately cross linked with TGase 1. The 140 kDa isoform represents involucrin cross linked to other proteins.
Loricrin	Represents the predominant protein of the cornified envelope and is a substrate for TGase 1. Some glutamines and lysines are cross-linked to loricrin molecules, also contains intra and inter disulfide bonds.
Cytokeratin 10/13	Cytokeratin 10 is an intermediate sized acidic type I keratin. It is absent in basal cells and expressed in suprabasilar cells. Cytokeratin 13 is an intermediate sized acidic type I cytoke­ratin that is a major component of non-cornified stratified epithelia e.g. tongue mucosa.
UGT1A	Increases water solubility of compounds by glucuronide attachment.
UDP-Glc-DH	Generates glucuronides for use by UGTs.
Pancytokeratins	As the epithelial control protein we used a pancytokeratin marker which reacts with a cadre of keratins that are expressed in proliferative keratinocytes as well as cell beginning to undergo differentiation. A keratinocyte-specific protein was selected as the relevant enzymes are expressed either exclusively or primarily in the surface epithelia and the cornified envelope proteins are only found in the epithelia.