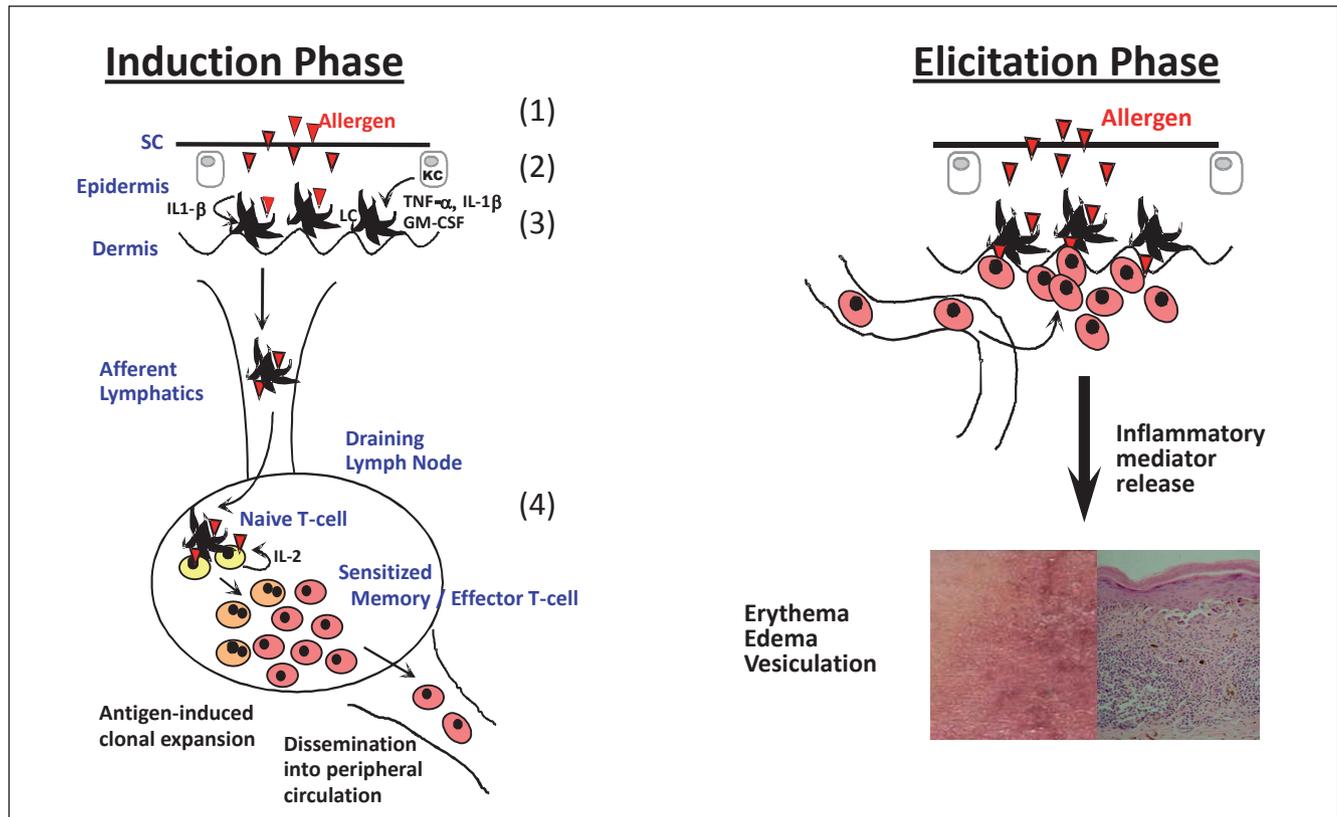


## Integrating Non-Animal Test Information into an Adaptive Testing Strategy – Skin Sensitization Proof of Concept Case

### Supplementary File A



#### Illustration of skin sensitization mechanism.

Skin sensitisation can be described as a delayed-type hypersensitivity reaction induced by low molecular weight reactive chemicals (allergens). It comprises two phases, induction and elicitation. The chemical must penetrate the skin (1) to react with endogenous proteins, either directly or after activation through enzymatic or oxidative processes (2). Next, epidermal Langerhans cells (LC) and immature dendritic cells (DC) take up and process haptenated proteins (3). LC cells mature into antigen presenting cells, which after migration to the lymph nodes present haptenized protein fragments to T-cells (4). The activated T cells home to the skin where, upon repeated contact with the same allergen (elicitation phase), they elicit an inflammatory response that can lead to dermal injury.