**Allergen specific IgE (Type I hypersensitivity) Detection Methods**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Platform** | **Assay Type** | **Detection Target** | **Sensitivity** | **Specificity** | **Quantitative** | **Invasiveness** | **Time** | **Suitability** |
| **Skin Prick Test (SPT)** | **In vivo** | **Immediate hypersensitivity** | **Moderate** | **Moderate** | **No** | **Skin exposure** | **15-30 minutes** | **Limited (irritant potential and false positives)** |
| **Basophil Activation Test (BAT)** | **Ex Vivo** | **Basophil degranulation** | **High** | **High** | **Yes** | **Blood test** | **Same day** | **Limited use; technically demanding** |
| **Immunoassay Test (IAT)** | **In vitro** | **Anti-PEG IgE** | **Low to High** | **Low to High** | **Yes** | **Blood test** | **1-2 days** | **Platform dependent** |