

Understanding the Plant GO Slim

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This page describes the GO Slim Classification for Plants developed at TAIR and the Gene Ontology Consortium. The Plant Slim represents a [subset](#) of the ontology that was designed specifically for plants and can be used for organizing sets of genes according to broad GO ontology categories. Each term in the Plant Slim corresponds to a specific term in the Gene Ontology. Genes which are annotated to the term itself (direct annotations), or to any of the children of the GO slim term (child annotations), are included in the corresponding GO slim category. The categories were chosen to provide a broad representation of the distribution of gene product functions, locations and biological roles and are intended to be non-overlapping. For example, carbohydrate metabolic process (GO:0005975) is a separate category that includes only annotations to carbohydrate metabolism or its children. Annotations to other metabolic pathways (e.g. DNA metabolic process (GO:0006259)) would not be included in this set. However, a gene may be represented in more than one GO slim category. For example, a gene product that has kinase activity as well as DNA binding activity would be included in both the kinase and DNA binding GO slim categories. Additionally, a single GO term may fall into one or more GO Slim categories, depending on its parentage. If a GO term has multiple parents, one parent may map to one GO Slim term while another parent maps to a different GO slim term. For example, the term 'response to cold (GO:0009409)' has two parent terms, 'response to stress (GO:0006950)' and 'response to external stimulus (GO:0009628)'. Because of these two parents, annotations to 'response to cold' map to the two GO Slim categories: 'response to stress' (from the 'response to stress' parent) and 'response to external stimulus'.

A complete list of the Plant GO slim terms currently used in TAIR can be found as a text file [here](#) . The Gene Ontology Consortium also maintains the Plant Slim, and other Slims, in a variety of [formats](#).