



Schematic representation of the Toll and Imd pathways (for more information see (4)). A serine protease cascade controlled by the serpin Necrotic, activates in the hemolymph the Toll ligand Spatzle. An intracellular signal transduction involving the genes Tube and Pelle, leads to the degradation of the Ik-B-like protein Cactus and to the translocation of the NF-kB-like transcription factors Dif and Dorsal into the nucleus of the fat body cells. The extracellular ligand and the receptor of the Imd pathway are still unknown. The signal leading to the activation of the transcription factor Relish involves the genes Imd/RIP, Tak1, the IKK complex genes IKKa and IKKg and the caspase Dredd. Translocation of Dif, Dorsal and Relish leads to the activation of anti microbial peptide genes. The number in brackets corresponds to the peak of activation within the expression profile. A: acute phase gene; L: late response gene; b: gene regulated by bacterial infection; b+f: gene regulated by both bacterial and fungal infection.