

### PRODUCT DATASHEET

For Research Use Only

#### DESCRIPTION:

N-Acetyl-D-glucosamine (D-GlcNAc) is a non-toxic derivatized glucose monosaccharide found in polymers (Peptidoglycan; PGN) of bacterial cell walls, chitin (e.g. fungi, invertebrates, crustaceans), hyaluronic acids and various glycans. It is also synthesized in the glycosylation pathway as uridine diphosphate (UDP-GlcNAc), which can then be released following degradation of glycosylated proteins. Atypical microbial danger signal that acts as a new activator of NLRP3 inflammasome by dissociating the enzyme hexokinase from the mitochondria. D-GlcNAc inhibits purified hexokinase, which is also involved in the glucose metabolism and obesity in mM range. For hexokinase dissociation from the mitochondria much higher concentrations are needed. Acceptor substrate for galactosyltransferases. Inhibits the lectin WGA and is used to identify, differentiate and characterize N-acetyl-beta-D-hexosaminidase(s). Used in the treatment of osteoarthritis and inflammatory bowel disease (IBD), including ulcerative colitis and Crohn's disease. Significantly enhances the prevention of joint damage and inhibits elastase activity and superoxide release from human polymorphonuclear leukocytes. Acts as a cytoprotective agent restoring the integrity and normal function of mucous membrane in humans. D-GlcNAc enhances the proliferation and collagen expression of fibroblasts, reduces hyperpigmentation and is therefore considered a valuable ingredient in cosmetics for improving skin wrinkles and color. Important substrate for the production of sialic acids. Used in multiple other applications in drug development and food supplement, based on a newly described bio-wave model.

#### SPECIFIC AGAINST:

Other

#### BACKGROUND:

**TYP:** Chemicals  
**CATEGORY:** Reagents & Chemicals/Biochemicals/Carbohydrates & Derivatives  
**DETAILED - CATEGORY:** Biochemical Compounds

#### HOW TO HANDLE/USE THE PRODUCT:

**STORAGE CONDITIONS:** Stable for 2 years after receipt when stored at -20°C.  
**STORAGE BUFFER:** Solid  
**SHIPPED ON DRY ICE:** No



N-ACETYL-D-GLUCOSAMINE

ITEM NO. LSHB-OP-2000000987-5G

HUB PRODUCTS

