Neoglycoproteins are glycosylated bovine serum albumin (BSA) molecules. Our first range of simple neoglycoproteins was achieved by the conjugation of phenylisothiocyanate glycosides with the ε-amino groups of lysine residues of BSA.

In order to improve accessibility and avidity of a carbohydrate-binding proteins, a new version of neoglycoproteins containing spacer arm (i.e. an alky spacer or a polyethylene glycol (PEG) chain), were developed and proposed either with monosaccharides / disaccharides or with glyoclusters

- **Monosaccharide spacer neoglycoproteins:**

  - **αDMan-BSA NeoM_A_O1**
  - **αDMan-BSA NeoM_P_01**
  - **αDMan-BSA NeoM_P_2O1**
  - **αL-Fuc-BSA NeoFuc_A_O1**
  - **αDGal-BSA NeoGa_A_O1**

- **Neoglycoclusters**, achieved by introduction of a carbohydrate cluster containing 3 to 9 carbohydrates units:

  - **αDMan-BSA NeoMClus_O3**
  - **αDMan-BSA NeoMClus_O9**
  - **αDMan-BSA NeoMClus_2O3**
  - **αDMan-BSA NeoMClus_2O9**

The synthesis of each neoglycoprotein and neoglycocluster is conducted under a standardized procedure allowing an excellent batch to batch reliability. Each neoglycoprotein and neoglycocluster is submitted to a complete quality control ensuring a total conformity with the specifications: purity, carbohydrates/protein ratio, labeling and **functionality assessed by interactions with lectins through GLYcoPROFILE method**.

Monosaccharide spacer neoglycoproteins and neoglycocluster are produced routinely and always available (from 0.5 mg to 1 mg) in unlabeled forms (labeled products available on request).

**Intended use**

Neoglycoproteins are known as “amplifiers” of carbohydrates-proteins interactions. The use of neoglycoproteins as tools to decipher glycoconjugates, carbohydrates binding proteins and more generally proteins-carbohydrates interactions were described in many studies (see bibliography).

Neoglycoproteins can be use for research purposes to:

- Identify lectins or lectin-like proteins.
- Purify lectins or other carbohydrate-binding proteins.
- Design new diagnostic tools.
- Discover biomarkers.
- Target drugs.
- Trigger immune response against carbohydrates moieties.

**Benefits**

- The affinity of neoglycocluster is $10^2$ to $10^3$ higher than usual neoglycoprotein.
- Neoglycoproteins ans neoglycoclusters are very reliable and stable compound.
- The high solubility in aqueous solutions makes neoglycoproteins and neoglycocluster very powerfull reagents for glycosciences studies.

**Bibliography**