Binding of carbohydrates and protein inhibitors to the surface of alpha-amylases - DTU Orbit (11/02/2019)

Binding of carbohydrates and protein inhibitors to the surface of alpha-amylases

This review on barley alpha-amylases 1 (AMY1) and 2 (AMY2) addresses rational mutations at distal subsites to the catalytic site, polysaccharide hydrolysis, and interactions with proteinaceous inhibitors. Subsite mapping of barley alpha-amylases revealed 6 glycone and 4 aglycone substrate subsites. Moreover, two maltooligosaccharide surface binding sites have been identified. Engineering of outer subsites -6 and +4 alters action patterns and relative specificities. Thus, compared to wild-type, Y105A AMY1 (subsite -6) shows 140%, 15%, and

General information
State: Published
Organisations: Department of Systems Biology, Enzyme and Protein Chemistry
Pages: 27-36
Publication date: 2005
Peer-reviewed: Yes

Publication information
Journal: Biologia
Volume: 60
ISSN (Print): 0006-3088
Ratings:
BFI (2019): BFI-level 1
Web of Science (2019): Indexed yes
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 0.86 SJR 0.299 SNIP 0.544
Web of Science (2017): Impact factor 0.696
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 0.85 SJR 0.313 SNIP 0.484
Web of Science (2016): Impact factor 0.759
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 0.88 SJR 0.329 SNIP 0.55
Web of Science (2015): Impact factor 0.719
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 0.86 SJR 0.319 SNIP 0.665
Web of Science (2014): Impact factor 0.827
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 0.84 SJR 0.303 SNIP 0.559
Web of Science (2013): Impact factor 0.696
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 0.62 SJR 0.255 SNIP 0.523
Web of Science (2012): Impact factor 0.506
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 0.68 SJR 0.256 SNIP 0.582
Web of Science (2011): Impact factor 0.557
ISI indexed (2011): ISI indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.29 SNIP 0.625
Web of Science (2010): Impact factor 0.609
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.289 SNIP 0.701
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 0.175 SNIP 0.74
Web of Science (2008): Indexed yes
Scopus rating (2007): SJR 0.209 SNIP 0.389
Scopus rating (2006): SJR 0.204 SNIP 0.67
Scopus rating (2005): SJR 0.181 SNIP 0.372
Web of Science (2005): Indexed yes
Scopus rating (2004): SJR 0.127 SNIP 0.723
Scopus rating (2003): SJR 0.163 SNIP 0.705
Scopus rating (2002): SJR 0.146 SNIP 0.453
Web of Science (2002): Indexed yes
Scopus rating (2001): SJR 0.187 SNIP 0.286
Scopus rating (2000): SJR 0.206 SNIP 0.384
Scopus rating (1999): SJR 0.147 SNIP 0.36
Original language: English
Keywords: isozyme chimeras, amylopectin, proteinaceous inhibitors, degree of multiple attack, barley alpha-amylase, secondary binding sites, subsite mutants
Source: orbit
Source-ID: 197790
Research output: Research - peer-review › Journal article – Annual report year: 2005