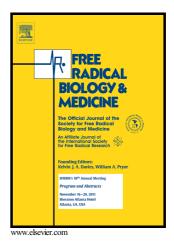
Author's Accepted Manuscript

Redox Signaling In The Gastrointestinal Tract

Salvador Pérez, Raquel Taléns-Visconti, Sergio Rius-Pérez, Isabela Finamor, Juan Sastre



 PII:
 S0891-5849(16)31150-9

 DOI:
 http://dx.doi.org/10.1016/j.freeradbiomed.2016.12.048

 Reference:
 FRB13154

To appear in: Free Radical Biology and Medicine

Received date: 2 July 2016 Revised date: 20 December 2016 Accepted date: 31 December 2016

Cite this article as: Salvador Pérez, Raquel Taléns-Visconti, Sergio Rius-Pérez Isabela Finamor and Juan Sastre, Redox Signaling In The Gastrointestinal Tract *Free Radical Biology and Medicine* http://dx.doi.org/10.1016/j.freeradbiomed.2016.12.048

This is a PDF file of an unedited manuscript that has been accepted fo publication. As a service to our customers we are providing this early version o the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain

ACCEPTED MANUSCRIPT

REDOX SIGNALING IN THE GASTROINTESTINAL TRACT

Salvador Pérez, Raquel Taléns-Visconti², Sergio Rius-Pérez, Isabela Finamor, and Juan Sastre

Department of Physiology, Faculty of Pharmacy. University of Valencia, 46100 Burjasot, Valencia, Spain

²Department of Pharmacy and Pharmaceutical Technology and Parasitology, Faculty of Pharmacy University of Valencia, 46100 Burjasot, Valencia, Spain

*CORRESPONDING AUTHOR: Prof. Juan Sastre, Department of Physiology, Faculty of Pharmacy, University of Valencia Avda. Vicent Andres Estellés s/n, 46100 Burjassot, Valencia, Spain. Tel. 0034 96 354 38 15; Fax: 0034 96 354 33 95. juan.sastre@uv.es

ABSTRACT

Redox signaling regulates physiological self-renewal, proliferation, migration and differentiation in gastrointestinal epithelium by modulating Wnt/ β -catenin and Notch signaling pathways mainly through NADPH oxidases (NOXs). In the intestine, intracellular and extracellular thiol redox status modulates the proliferative potential of epithelial cells. Furthermore, commensal bacteria contribute to intestine epithelial homeostasis through NOX1- and dual oxidase 2-derived reactive oxygen species (ROS). The loss of redox homeostasis is involved in the pathogenesis and development of a wide diversity of gastrointestinal disorders, such as Barrett's esophagus, esophageal adenocarcinoma, peptic ulcer, gastric cancer, ischemic intestinal injury, celiac disease, inflammatory bowel disease and colorectal cancer. The overproduction of superoxide anion together with inactivation of superoxide dismutase are involved in the pathogenesis of Barrett's esophagus and its transformation to adenocarcinoma. In *Helicobacter pylori*-induced peptic ulcer, oxidative stress derived from the leukocyte

Download English Version:

https://daneshyari.com/en/article/5501950

Download Persian Version:

https://daneshyari.com/article/5501950

Daneshyari.com