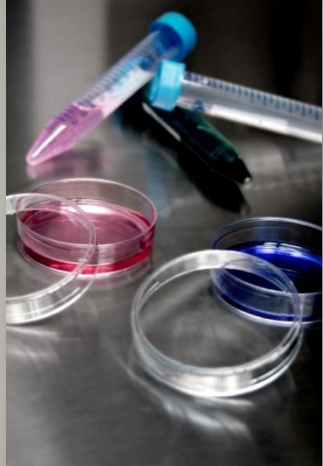




BAG3 and BIOUNIVERSA



Intellectual property

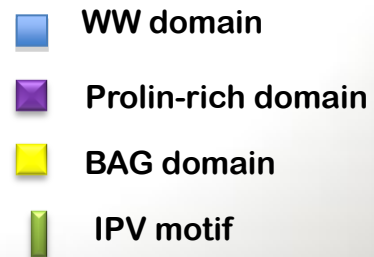
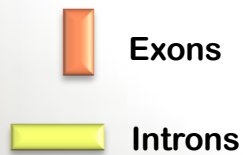
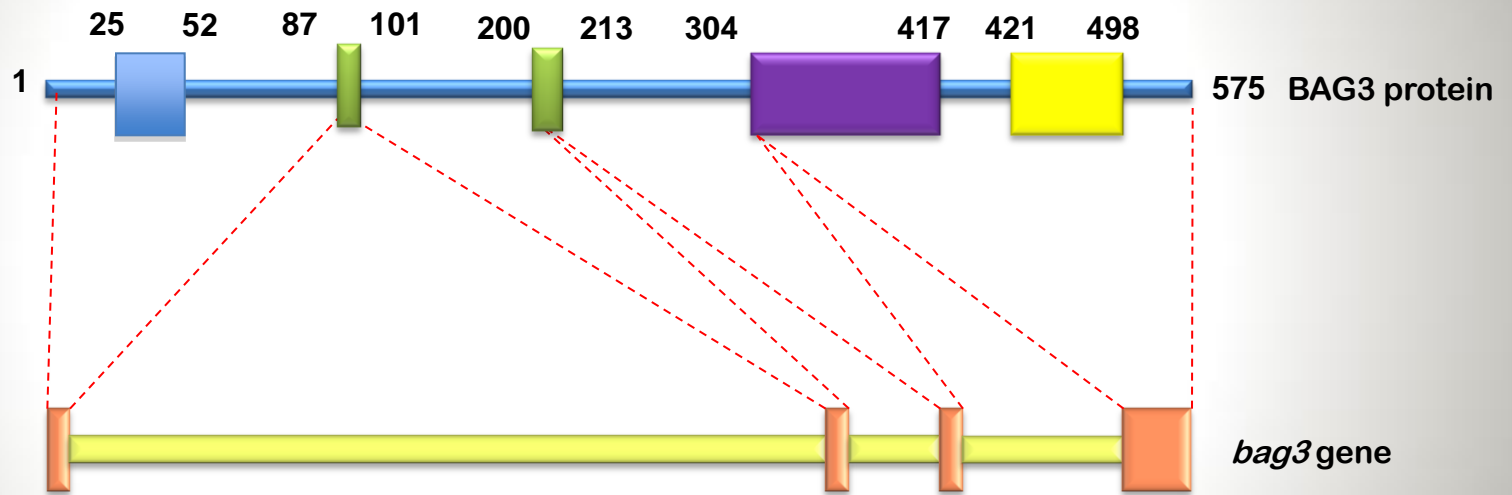
- Leone Arturo, Turco Maria Caterina.
BAG3 antibodies to be used in research, diagnostics and therapy for cell death- involving diseases. Priority: December 28th, 2001.
- Granted: AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LT, LU, LV, MC, MK, NL, PY, RO, SE, SI, SK, TR, US.
- Published: CA.

- Turco Maria Caterina.
Biochemical serum marker.
- Priority: December 4th, 2009.
- Pending: IT, WO- Patent Cooperation Treaty.

BAG3 publications from our labs

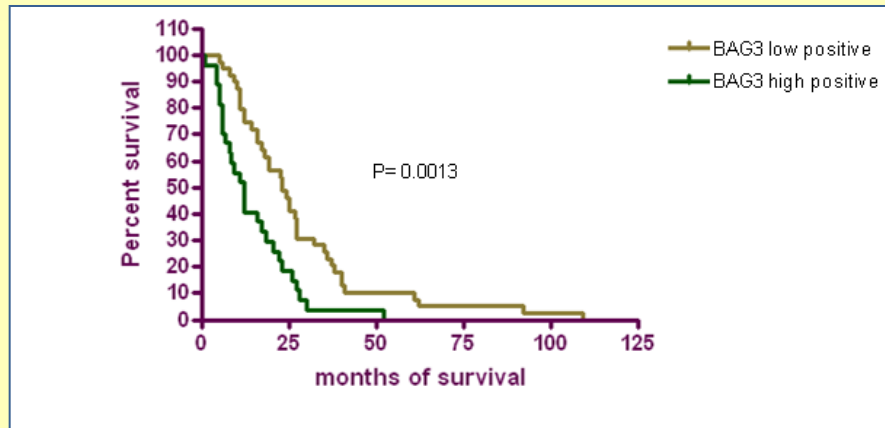
- 1. Falco A et al. [BAG3 controls angiogenesis through regulation of ERK phosphorylation.](#) Oncogene, 2012.
- 2. Franco R et al. [Expression of the Anti-Apoptotic Protein BAG3 in Human Melanomas.](#) J Invest Dermatol. 2011
- 3. Festa M et al. [BAG3 protein is overexpressed in human glioblastoma and is a potential target for therapy.](#) Am J Pathol. 2011
- 4. Rosati A et al. [BAG3: a multifaceted protein that regulates major cell pathways.](#) Cell Death Dis. 2011
- 5. Ammirante M et al. [BAG3 is required for IKK \$\alpha\$ nuclear translocation and emergence of castration resistant prostate cancer.](#) Cell Death Dis. 2011
- 6. De Marco M et al. [BAG3 protein is induced during cardiomyoblast differentiation and modulates myogenin expression.](#) Cell Cycle. 2011
- 7. Basile A, et al. [Exposure to 50 Hz electromagnetic field raises the levels of the anti-apoptotic protein BAG3 in melanoma cells.](#) Rosati A. J Cell Physiol. 2011.
- 8. Staibano S et al. [BAG3 protein delocalisation in prostate carcinoma.](#) Tumour Biol. 2010
- 9. Cesaro E et al. [WT1 protein is a transcriptional activator of the antiapoptotic bag3 gene.](#) Leukemia. 2010
- 10. Ammirante M et al. [IKK \$\gamma\$ protein is a target of BAG3 regulatory activity in human tumor growth.](#) Proc Natl Acad Sci U S A. 2010
- 11. Fontanella B et al. [The co-chaperone BAG3 interacts with the cytosolic chaperonin CCT: new hints for actin folding.](#) Int J Biochem Cell Biol. 2010
- 12. Basile A et al. [Evidence for modulation of BAG3 by polyomavirus JC early protein.](#) J Gen Virol. 2009
- 13. Rosati A et al. [Identification of a Btk-BAG3 complex induced by oxidative stress.](#) Leukemia. 2009
- 14. Rosati A et al. [BAG3 protein regulates caspase-3 activation in HIV-1-infected human primary microglial cells.](#) J Cell Physiol. 2009
- 15. Bruno AP et al. [Identification of a synaptosome-associated form of BAG3 protein.](#) Cell Cycle. 2008
- 16. Gentilella A et al.. [Activation of BAG3 by Egr-1 in response to FGF-2 in neuroblastoma cells.](#) K. Oncogene. 2008
- 17. Franceschelli S et al. [bag3 gene expression is regulated by heat shock factor 1.](#) J Cell Physiol. 2008
- 18. Rosati A et al. [Apoptosis inhibition in cancer cells: a novel molecular pathway that involves BAG3 protein.](#) Int J Biochem Cell Biol. 2007
- 19. Rosati A et al. [Evidence for BAG3 modulation of HIV-1 gene transcription.](#) J Cell Physiol. 2007 Mar;210(3):676-83.
- 20. Chiappetta G et al. [The antiapoptotic protein BAG3 is expressed in thyroid carcinomas and modulates apoptosis mediated by TRAIL.](#) J Clin Endocrinol Metab. 2007
- 21. Bonelli P et al. [BAG3 protein regulates stress-induced apoptosis in normal and neoplastic leukocytes.](#) Leukemia. 2004
- 22. Romano MF et al. [BAG3 protein regulates cell survival in childhood acute lymphoblastic leukemia cells.](#) Cancer Biol Ther. 2003
- 23. Romano MF et al. [BAG3 protein controls B-chronic lymphocytic leukaemia cell apoptosis.](#) Cell Death Differ. 2003

The anti-apoptotic BAG3 protein and *bag3* gene



BAG3 as a prognostic marker

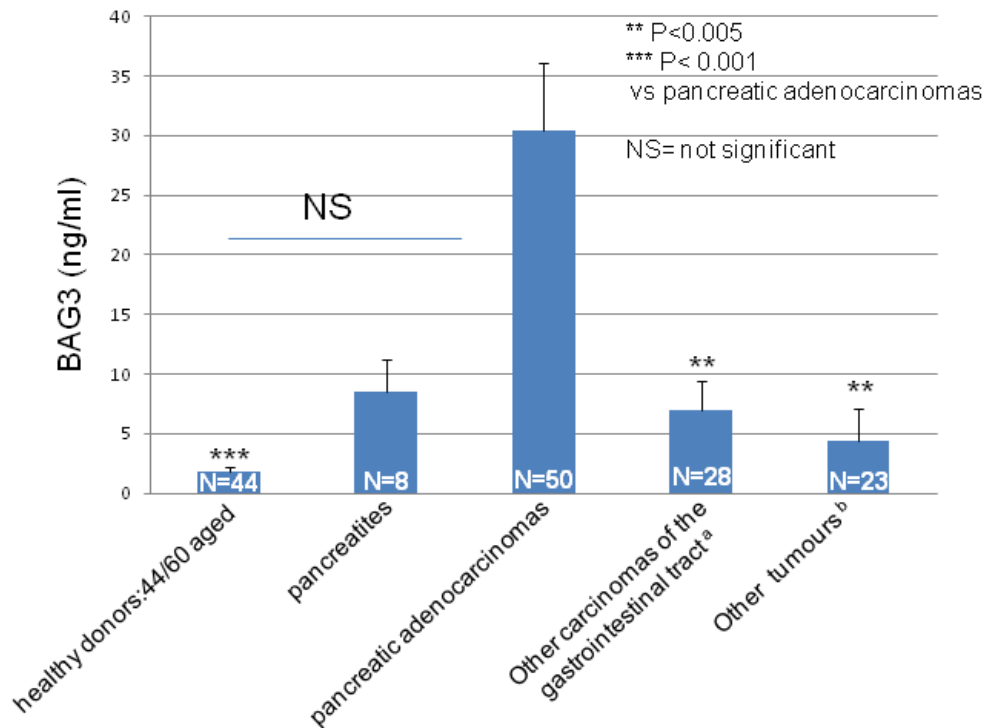
BAG3 levels are higher in pancreatic cancer tissues from patients with a poorer prognosis



N tot	M	F	age average (\pm s.e.)	pN+ (%)	pM+ (%)	pT3 (%)	survival average (months \pm s.e.)
66	36	30	61.09 (\pm 1.4)	80.3	3.7	97.0	22.5 (\pm 2.4)

BAG3 in human serum

Early detection of pancreatic adenocarcinoma



^a: colon carcinoma
gastric carcinoma
hepatic carcinoma

^b: breast carcinoma
thyroid carcinoma
lung carcinoma