

# Salmonella I 4,[5],12:i:-

**Background:** *Salmonella enterica* subsp. *enterica* serovar I 4,5,12:i:- is a variant of *Salmonella* Typhimurium. S. I 4,[5],12:i:- is a monophasic serovar that lacks the second flagellar antigen (i.e., antigen 1,2 in serovar Typhimurium). This serovar emerged as a common serovar after 1990's. Multiple reports and outbreaks linked to S. 4,5,12:i:- have occurred globally. Multidrug resistant (MDR) and pan-susceptible strains have been reported. MDR strains with the resistant patterns ACKGSuTm and ACSuGSTTm were reported in Thailand and Spain, respectively (abbrev: ampicillin (A), chloramphenicol (C), kanamycin (K), gentamicin (G) sulfamethoxazole (Su), trimethoprim (Tm), tetracycline (T), streptomycin (S)). Two clones with different gene deletions were identified, one in the US and one in Europe.

**Animal reservoir:** Chicken and swine are the major animal reservoirs of this serovar.

**Geographical distribution:** Global distribution, this serovar have been reported among the most common serovars in US, EU, and Thailand.

**Outbreaks:** Several outbreaks have been associated with serovar I 4,[5],12:i:-.

Year	Location	Associated source	Number of cases
2023	Canada-multistate	Raw pet food, cattle exposure	40
2018	US-multistate	<a href="#">Kosher Chicken Products</a>	25
2010	US-multistate	Alfalfa Sprouts	140
2011-2012	US-multistate	probably live-animal markets	>14
2010	US-multistate	Frozen rodents	34
2010	France	Dried pork sausage	69
2007	US-multistate	Pot pie	272

## Relevant links and references:

1. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2772592/>
2. <http://www.ncbi.nlm.nih.gov/pubmed/19292687>
3. <http://wwwnc.cdc.gov/eid/article/20/1/pdfs/13-1179.pdf>
4. <https://www.cdc.gov/salmonella/chicken-08-18/index.html>
5. <https://finance.yahoo.com/news/public-health-notice-outbreak-extensively-201500243.html>